

express
RECEIVED

SEP 28 2007

UTAH DIVISION OF
SOLID & HAZARDOUS WASTE

07.02903



**UNITED STATES GYPSUM COMPANY-
SIGURD, UTAH**

**APPLICATION FOR A PERMIT TO
OPERATE A CLASS III LANDFILL**

SEPTEMBER, 2007

Utah Class III Landfill Permit Application Form

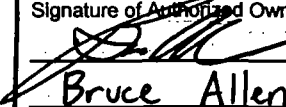
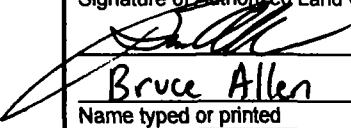
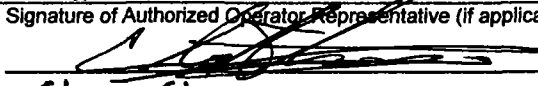
Part I. General Information					
APPLICANT, PLEASE COMPLETE ALL SECTIONS					
<input type="checkbox"/> Class IIIa <input checked="" type="checkbox"/> Class IIIb	<input checked="" type="checkbox"/> Application Type		<input type="checkbox"/> New Application <input checked="" type="checkbox"/> Renewal Application	<input checked="" type="checkbox"/> Facility Expansion <input type="checkbox"/> Modification	
For Renewal Applications, Facility Expansion Applications and Modifications Enter Current Permit Number 9418					
III. Facility Name and Location					
Legal Name of Facility Jumbo					
Site Address (street or directions to site) 81 North State St.				County Sevier	
City Sigurd		State UT	Zip Code 84657	Telephone (435) 896-2400	
Township 22S	Range 1W	Section(s) 29	Quarter/Quarter Section SE 4	Quarter Section	
Main Gate Latitude 111 degrees 55 minutes 28 seconds			Longitude 38 degrees 51 minutes 25 seconds		
IV. Facility Owner(s) Information					
Legal Name of Facility Owner United States Gypsum Company					
Address (mailing) 550 West Adams Street					
City Chicago		State IL	Zip Code 60661-3676	Telephone (312) 436-4000	
V. Facility Operator(s) Information					
Legal Name of Facility Operator United States Gypsum Company					
Address (mailing) P.O. Box 570160					
City Sigurd		State UT	Zip Code 84657	Telephone (435) 896-2400	
VI. Property Owner(s) Information					
Legal Name of Property Owner United States Gypsum Company					
Address (mailing) 550 West Adams Street					
City Chicago		State IL	Zip Code 60661-3676	Telephone (312) 436-4000	
VII. Contact Information					
Owner Contact Bruce Allen			Title Plant Manager		
Address (mailing) 550 West Adams Street					
City Chicago		State IL	Zip Code 60661-3676	Telephone (435) 896-2401	
Email Address ballen@usg.com			Alternative Telephone (cell or other) (435) 896-2400		
Operator Contact Clay Shumway			Title Quarry Manager		
Address (mailing) P.O. Box 570160					
City Sigurd		State UT	Zip Code 84657	Telephone (435) 896-2431	
Email Address cshumway@usg.com			Alternative Telephone (cell or other) (435) 896-2400		
Property Owner Contact Bruce Allen			Title Plant Manager		
Address (mailing) 550 West Adams Street					
City Chicago		State IL	Zip Code 60661-3676	Telephone (435) 896-2401	
Email Address ballen@usg.com			Alternative Telephone (cell or other) (435) 896-2400		

RECEIVED

NOV 01 2007

UTAH DIVISION OF
SOLID & HAZARDOUS WASTE

Utah Class III Landfill Permit Application Form

Part I. General Information (Continued)			Part II. Facility Area																						
Waste Types (check all that apply) <input type="checkbox"/> All types of non-hazardous industrial waste generated by the facility OR the following specific waste types <table border="0"> <tr> <td>Waste Type</td> <td>Combined Disposal Unit</td> <td>Monofill Unit</td> </tr> <tr> <td><input type="checkbox"/> Construction & Demolition</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/> Industrial</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Incinerator Ash</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Animals</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Asbestos</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>			Waste Type	Combined Disposal Unit	Monofill Unit	<input type="checkbox"/> Construction & Demolition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Incinerator Ash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Asbestos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>	Facility Area Facility Area..... <u>27.77</u> acres Disposal Area..... <u>27.77</u> acres Design Capacity Years..... <u>250</u> Cubic Yards..... <u>935,299</u> Tons..... <u>187,059</u>	
Waste Type	Combined Disposal Unit	Monofill Unit																							
<input type="checkbox"/> Construction & Demolition	<input type="checkbox"/>	<input type="checkbox"/>																							
<input checked="" type="checkbox"/> Industrial	<input type="checkbox"/>	<input type="checkbox"/>																							
<input type="checkbox"/> Incinerator Ash	<input type="checkbox"/>	<input type="checkbox"/>																							
<input type="checkbox"/> Animals	<input type="checkbox"/>	<input type="checkbox"/>																							
<input type="checkbox"/> Asbestos	<input type="checkbox"/>	<input type="checkbox"/>																							
<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>																							
<small>Note: All waste types must be generated by the industry which owns the facility</small>																									
Part III. Fees and Application Documents																									
Indicate Documents Attached To This Application <input checked="" type="checkbox"/> Facility Map or Maps <input type="checkbox"/> Ground Water Report		<input checked="" type="checkbox"/> Application Fee: Amount \$ <u>100.00</u> P.O. <u>891674</u> <input checked="" type="checkbox"/> Facility Legal Description <input checked="" type="checkbox"/> Closure Design <input checked="" type="checkbox"/> Plan of Operation <input checked="" type="checkbox"/> Cost Estimates <input checked="" type="checkbox"/> Waste Description <input type="checkbox"/> Financial Assurance																							
THEREBY CERTIFY THAT THIS INFORMATION AND ALL ATTACHED PAGES ARE CORRECT AND COMPLETE																									
Signature of Authorized Owner Representative  Name typed or printed <u>Bruce Allen</u>		Title <u>Plant Manager</u> Address <u>81 N. State St., Sigurd UT, 84657</u>																							
Signature of Authorized Land Owner Representative (if applicable)  Name typed or printed <u>Bruce Allen</u>		Title <u>Plant Manager</u> Address <u>81 N. State St., Sigurd, UT 84657</u>																							
Signature of Authorized Operator Representative (if applicable)  Name typed or printed <u>Clay Shumway</u>		Title <u>Quarry Manager</u> Address <u>81 N. State St. Sigurd, UT 84657</u>																							

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF SOLID AND HAZARDOUS WASTE

APPLICATION FOR A PERMIT TO OPERATE A CLASS III LANDFILL

The applicant shall submit, in duplicate, an original permit application, a general report, and a technical report to:

Dennis R. Downs, Director
Division of Solid and Hazardous Waste
Department of Environmental Quality
P.O. Box 144880
Salt Lake City, Utah 84114-4880

express
RECEIVED
SEP 28 2007
UTAH DIVISION OF
SOLID & HAZARDOUS WASTE
07.02903

PART I – GENERAL INFORMATION

1. Name of Facility: Jumbo
2. Site Location: Sevier County, Township 22 South, Range 1 West, Section 29
3. Facility Owner: United States Gypsum Company
4. Facility Operator: United States Gypsum Company
5. Contact Persons: Clay Shumway Joshua Reese
 Quarry Manager Project Engineer
 Address: P.O. Box 570160
 Sigurd, UT 84657

 Telephone: (435)896-2431 (435) 896-2423
6. Type of Application:

☐ Class IIIa Landfill

☒ Class IIIb Landfill

☐ Initial Application

☒ Permit Renewal
7. Property Ownership:

☒ Presently owned by applicant

☐ To be purchased by applicant

☐ To be leased by applicant

Property owner (if different from applicant)

Name United States Gypsum Company
Address 550 West Adams Street
Chicago, IL 60661-3676
Telephone (312) 436-4000

8. Certification of submitted information.

Bruce Allen Plant Manager
(Name of Official) (Title)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

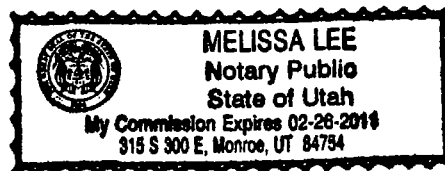
Signature: [Signature] Date: 9/26/07

SUBSCRIBED AND SWORN to before This 26th day of Sept, 2007

My commission expires on the 26th day of February, 2011

[Signature]
Notary Public in and for

(SEAL) Sewer County, Utah.



Important Note: An application for a permit to construct and operate a landfill is the documentation that the landfill will be located, designed, constructed, and operated to meet the requirements of Rules R315-302, R315-304, R315-308, and R315-309 of the Utah Solid Waste Permitting and Management Rules and the *Utah Solid and Hazardous Waste Act (UCA 19-6)*. The application should also be written so that the landfill operator, after reading it, will be able to operate the landfill according to the requirements with a minimum of additional training. Two copies of the complete application are required.

CHECKLIST OF ADDITIONAL INFORMATION REQUIRED

(Please see Section R315-310-5 of the *Utah Solid Waste Permitting and Management Rules*)

PART II – GENERAL REPORT

A-INTRODUCTION

A-1 Completed PART I- GENERAL INFORMATION (R315-310-3(1)(a)):

United States Gypsum Company
(Applicant, Property Owner, and Responsible Party)
Address: 81 North State Street
P.O. Box 570160
Sigurd, UT 84657

A-2 General description of the facility (R315-310-3(1)(a)):

A-3 Legal description; proof of ownership, lease agreement, or other mechanism; latitude and longitude of the site; and land use and zoning of surrounding area (R315-310-3(1)(c)):

A-2&3-1: United States Gypsum Company, a Chicago based company wishes to submit an application for modification of the Jumbo Class IIIb solid waste landfill, permit #9418. The landfill is located on patented mining claims in Sevier County, Township 22 South, Range 1 West, Section 29. (Lat. 111°55'28" Long. 38°51'25") **(See proof of ownership in Appendix C)**. The Jumbo landfill is incorporated into the company's ongoing Approved Reclamation Plan. A variance was submitted on August 20, 1993 to obtain approval from the State of Utah, Department of Natural Resources, Division of Oil, Gas, and Mining. The Department granted the variance based on the approval of permit #9418 **(see enclosed letter, Appendix A)**. The Jumbo solid waste landfill is a 27.77 acre area, approximately 60 feet in depth, located in the mined out N-1 Pit, Jumbo patented claim **(see exhibits for location, Appendix B, C, D, E)**. The Jumbo solid waste landfill is located away from any major drainage features and the topography is typical of rolling hills. The Jumbo solid waste landfill is located five (5) miles from the nearest residential home, four (4) miles from any industrial building, and four (4) miles from the nearest well. This well is used for process water for the manufacturing of gypsum

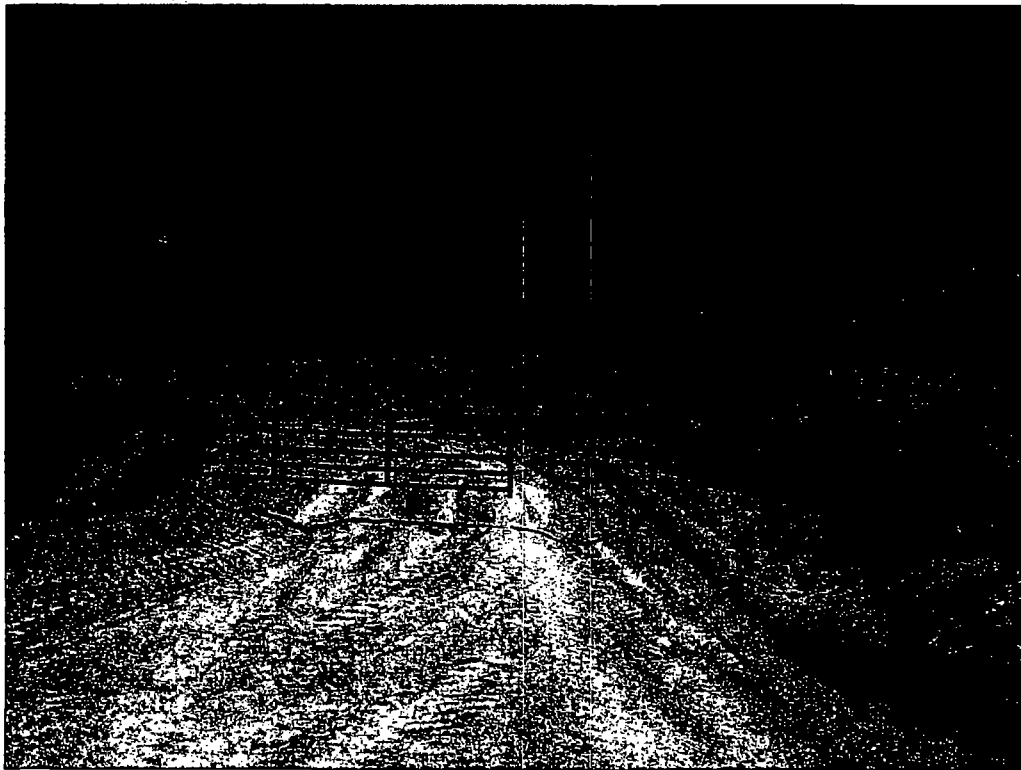
wallboard. Access to the Jumbo solid waste landfill is by the existing major haul road from the wallboard plant to the active mining area on the patented Jensen Claim.

A-4 The types of waste and area served by the facility (R315-310-3(1)(d)):

A-4-1: The Jumbo solid waste landfill is a single user site only. Materials placed in the site include: gypsum waste produced by the United States Gypsum wallboard plant in Sigurd and some remnant ready-mix product, paper, and cardboard. The gypsum waste, deemed a non-hazardous waste, is hauled to the Jumbo solid waste landfill with quarry haul trucks. All other plant waste (including household waste) is separated and disposed of through White's Sanitation. Any hazardous waste is disposed of properly through a contractor. With the waste already segregated, the operators only do a general inspection and do not need to be trained to recognize PCB or any other hazardous waste. The loads are trimmed to minimize any littering along the quarry haul road. Daily waste tonnages are recorded and filed in the Quarry Office (**See Appendix F**).

A-5 A demonstration that the landfill is not a commercial landfill:

A-5-1: Fencing is installed around the entire Phase 1 dump area with a lockable entrance gate to prevent illegal dumping and control animals. The gate is opened and watched during business hours and secured and locked when the quarry is not in operation (See Picture 1 below). Fencing will be placed around the boundaries of Phases 2, 3, and 4 before any material is placed at the site.



Picture 1: Entrance to the landfill is closed and locked when not in use and it is posted as a "Private Landfill Only." Photo taken 8/24/07

B- PLAN OF OPERATION 9R315-310-3(1)(e))

B-1 An intended schedule of construction (R315-302-2(2)(a)):

B-2 A description of on-site waste handling procedures and an example of the form used to record the weights or volumes of waste received (R315-302-2(2)(b) and R315-310-3(1)(f)):

B-3 A schedule for conducting inspections and monitoring and examples of the forms used to record the results of the inspections and monitoring (R315-302-2(2)(c) and R315-310-3(1)(g)):

B- 1&2&3-1: U.S. Gypsum's, Sigurd Plant Phase 1 landfill has a total site capacity of 315,247 cubic yards or 63,049 tons. Current fill to date is 190,765 cubic yards, or 38,153 tons. Remaining capacity is 124,482 cubic yards, or 24,896 tons. The Phase 2 landfill has an estimated capacity of 42,302 tons, or 211,511 cubic yards based on Phase 1's acreage-volume percentage. The Phase 3 landfill has an estimated capacity of 35,162 tons, or 175,811 cubic yards. The Phase 4 landfill has an estimated capacity of 46,546 tons, or 232,730 cubic yards.

Handling Procedures: The gypsum waste, deemed a non-hazardous waste by the Department of Environmental Quality, is hauled to the Jumbo solid waste landfill in the following manner: The waste material is deposited in a waste bunker at the front of the plant. A front-end loader operator will inspect the bunker to make sure everything is the proper material and then load the material into a haul truck. The loads are then trimmed to minimize any littering along the quarry haul road. The quarry haul trucks haul from the plant to the landfill site. The haul trucks then enter the dumpsite and empty their load working their way from the perimeter to the entrance. The operator logs the amount hauled to the dump. Once a layer is full, a bulldozer will work the whole site over to break everything up and smooth it over. This prepares the dump for the next layer and should eliminate any major voids in the dump. A thin layer of shale is placed over the dump at this same time.

Daily waste tonnages are recorded and filed in the Quarry Office (**See Appendix F**).

Daily inspections of the landfill are conducted by authorized personnel and documented (**See Appendix G**). Due to on-going mining operations in the near vicinity, the following equipment will be available for excavation, compaction, spreading, and other related activities:

- Two (2) Front-end loaders
- Two (2) Haul trucks (40 & 35 ton)
- Two (2) Bulldozers with rippers
- Road Grader
- Backhoe

No zoning exists at the site. The general surrounding area is controlled by the Bureau of Land Management as a multiple use area.

Approximately 12 tons of total waste, per week is dumped at the site.

Gypsum Panel Products containing the following ingredients (**see enclosed MSDS,**

Appendix H):

Gypsum	>85.00%
Cellulose	<10.00%

Starch	<3.00%
Silica-Crystalline, Respirable	<0.10%
MAY CONTAIN THE FOLLOWING	
Fibrous Glass (Textile Grade)	<1.00%
Ethylene Vinyl Acetate Polymer	<2.00%

Topping Joint Compound Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix I):

Limestone or Dolomite or Gypsum	>50.00%
Water	<35.00%
Mica, Respirable	<5.00%
Ethylene-Vinyl Acetate Polymer	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Acetaldehyde	<0.10%
Crystalline Silica	<2.00%
MAY CONTAIN THE FOLLOWING	
Talc	<5.00%

Topping Joint III Compound Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix J):

Limestone	>50.00%
Water	<35.00%
Expanded Perlite	<5.00%
Mica, Respirable	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Acetaldehyde	<0.10%
Silica- Crystalline, Respirable	trace

Lightweight All Purpose Joint Compound Plus 3 Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix K):

Limestone or Dolomite or Gypsum	>35.00%
Water	>40.00%
Expanded Perlite	<10.00%
Vinyl Acetate Polymer	<10.00%
Attapulgite	<5.00%
Crystalline Silica, Respirable	<2.00%

Lightweight All Purpose Joint Compound Plus 3 with Dust Control Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix L):

Limestone	>35.00%
Water	>35.00%
Expanded Perlite	<15.00%

Blend of Proprietary Ingredients	<10.00
Crystalline Silica, Respirable	<5.00%

Two-Purpose Joint Compound – Total Ready Mix waste consists of the following ingredients (**see enclosed MSDS, Appendix M**):

Limestone	>50.00%
Water	<40.00%
Mica, Respirable	<5.00%
Expanded Perlite	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Vinyl Acetate Monomer	Trace
Acetaldehyde	Trace
Crystalline Silica, Respirable	Trace

Lightweight Topping Joint Compound Topping Lite Ready-Mix waste consists of the following ingredients (**see enclosed MSDS, Appendix N**):

Limestone or Dolomite	<50.00%
Water	>30.00%
Expanded Perlite	<10.00%
Vinyl Acetate Polymer	<10.00%
Attapulgite	<5.00%
Silica- Crystalline, Respirable	<2.00%

Taping Joint Compound Ready-Mix waste consists of the following ingredients (**see enclosed MSDS, Appendix O**):

Limestone or Dolomite	>65.00%
Mica, Respirable	<15.00%
Attapulgite	<10.00%
Vinyl Alcohol Polymer	<5.00%
Hydroxypropyl Amylopectin Phosphate	<5.00%
Silica- Crystalline, Respirable	<5.00%

All Purpose Joint Compound Mid-Weight Ready-Mix waste consists of the following ingredients (**see enclosed MSDS, Appendix P**):

Limestone or Dolomite	>45.00%
Water	<45.00%
Expanded Perlite	<5.00%
Mica, Respirable	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Crystalline Silica, Respirable	<2.00%

Total Lite Joint Compound Ready Mix waste consists of the following ingredients (see enclosed MSDS, Appendix Q):

Water	>40.00%
Limestone	>35.00%
Expanded Perlite	<10.00%
Vinyl Acetate Polymer	<10.00%
Attapulgite	<5.00%
Crystalline Silica, Respirable	<2.00%

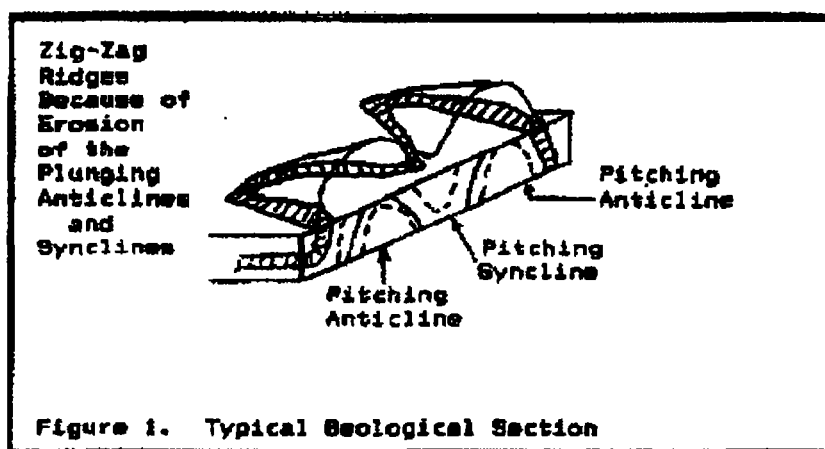
There is no food waste or hazardous material dumped at this site.

B-4 Contingency plans in the event of a fire or explosion (R315-302-2(2)(d)):

B-4-1: Due to the Fire Resistant Nature of Wallboard, there is no chance for any of the waste material to self combust or to even catch fire with a significant ignition source. Therefore, no contingency plans for fire or explosion are needed.

B-5 Corrective action programs to be initiated if ground water is contaminated (R315-302-2(2)(e)):

B-5-1: A vertical anhydrite zone crosses Northeast-Southwest through the pit area and is sandwiched on either side by a massive impervious shale formation. Fifteen (15) drill holes drilled to a depth of 20 feet were explored for rock type and ground water. No ground water was encountered at explored depths. Mineral exploration and mining in this area indicates a series of anticlines and synclines cut off by natural erosion. Therefore, the continuity of the gypsum bed was terminated down dip from the put area (see figure 1).

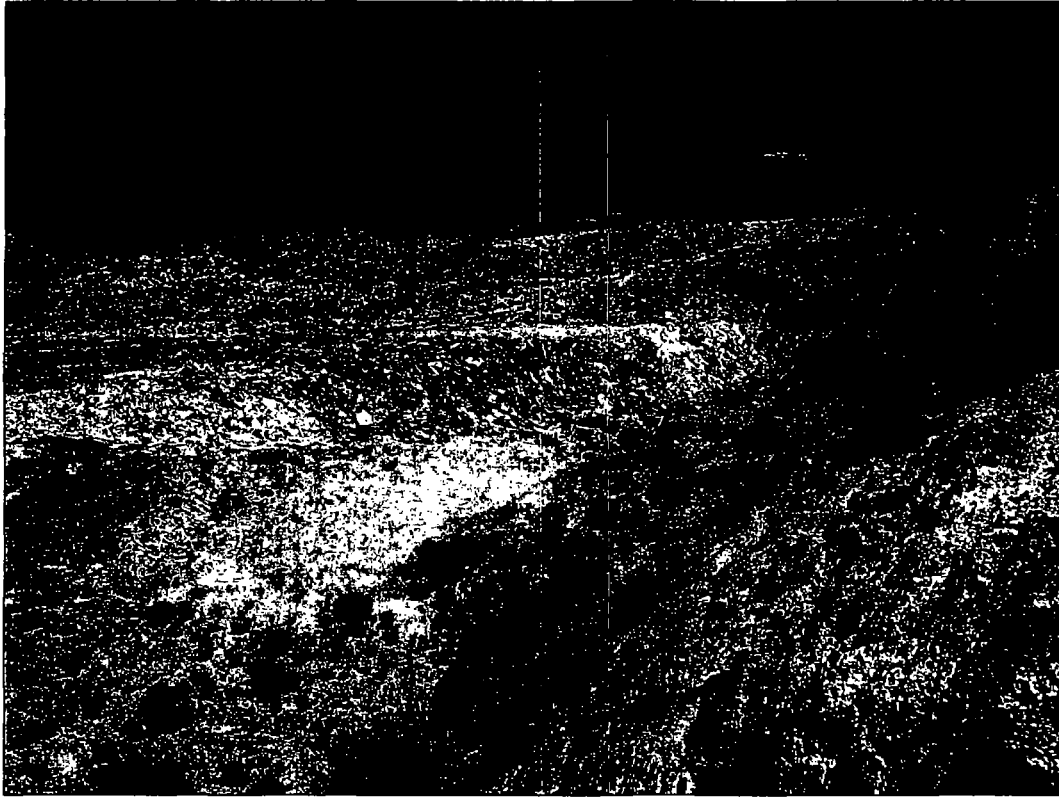


A Class IIb landfill is exempt from the normal water monitoring requirements of Rule 315-308, system (R315-304-5,4(c))

B-6 Contingency plans for other releases, e.g. explosive gases or failure of run-off collection system (R315-302—2(2)(f)):

B-6-1: Due to the nature of Wallboard, there is no chance for any of the waste material to self combust or to decompose into explosive gases. Therefore, no contingency plans for

fire or explosion are needed. With regard to the possibility of a failure of run-off collection or diversion, the Landfill is located in a bowl and designed in such a manner that run-off will not wash out material nor will it wash out the final closure cap (See Picture 2 & 3 below).



Picture 2: The Phase 1 Landfill is located in a bowl, with small outlying hills that protect it. Photo taken 8/24/07



Picture 3: Phases 2, 3, & 4 are located in a similar bowl, with small outlying hills that protect it. Photo taken 9/19/07

Heavy run-off would only settle in the bowl and would be quickly absorbed into the material. If ever needed, the following equipment would be available to build any berms, dig any trenches, and other activities related to controlling run-off:

- Two (2) Front-end loaders
- Two (2) Haul trucks (40 & 35 ton)
- Two (2) Bulldozers with rippers
- Road Grader
- Backhoe

B-7 A plan to control fugitive dust generated from roads, construction, general operations, and covering the waste (R315-302-2(g)):

B-7-1: U.S. Gypsum has a 6,000 gallon water truck on site and it is equipped to spray the roads, the landfill area, and any other operation related to the landfill in order to control fugitive dust.

B-8 Description of maintenance of installed equipment (R315-302-2(2)(h)):

B-8-1: A Class IIIb landfill is exempt from the normal water monitoring requirements of Rule R315-308, as per Solid Waste Permitting and Management Rules R315-304-5, 4(c).

B-9 Procedures for excluding the receipt of hazardous or PCB containing waste (R315-302-2(2)(i)):

B-9-1: Operators will inspect material as they load it onto the trucks to be hauled to the landfill. Only material that is described in A-4-1 is contained in the waste bunker. Therefore, with no PCB or hazardous materials allowed in the waste bunker, there is no training required of the operators to identify these materials.

B-10 Procedures for controlling disease vectors (R315-302-2(2)(j)):

B-10-1: The materials being placed in the site are not considered a food source for any possible disease Vectors.

B-11 A plan for alternative waste handling (R315-302-2(2)(k)):

B-11-1: White's Sanitation, located in Richfield Utah, will serve as an alternate waste handling source, if necessary. USG confirmed with Max White on September 24, 2007 that they could handle any and all waste requirements, if needed. White's currently handles all other waste at the plant.

B-12 A general training and safety plan for site operations (R315-302-2(2)(n)):

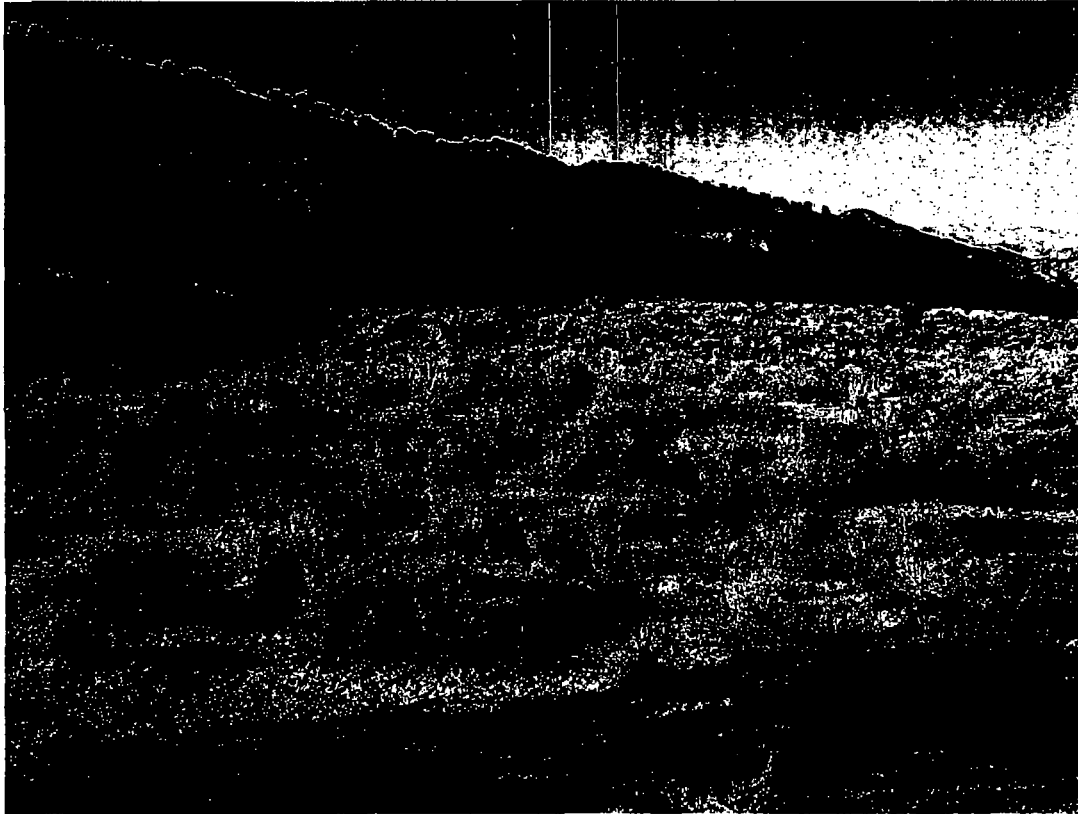
B-12-1: U.S. Gypsum Company follows strict Mine Safety and Health Administration guidelines for general training and safety. The Landfill is located in the Quarry and falls under MSHA jurisdiction and therefore all work conducted in the landfill is consistent with all MSHA safety and training requirements (**See Appendix R**).

B-13 How the facility will meet the requirements of Rule R315-304 (R315-310-5(2)(f)):

B-13-1: Application is for a Class IIIb Landfill.

B-14 Any other site specific information pertaining to the plan of operation required by the Executive Secretary (R315-302-2(2)(o)):

B-14-1: The new landfill permit is to include the original 9.36 acres as well as an area to the southwest that includes an additional 18.41 acres. No filling of the additional landfill area (Phases 2, 3, & 4) will take place until proper notice is given to the Executive Secretary (See Picture 4 below).



Picture 4: Phases 2, 3, & 4 are located directly southwest of Phase 1 in the same gypsum mined-out pit. Photo taken 9/19/07

C- PART III TECHNICAL REPORT

MAPS:

C-1: Topographic map drawn to the required scale and contours showing the boundaries of the landfill unit; design and location of the run-on/run-off control structures; (R315-310-4(2)(a)(i))(See **Appendix B, C, D, E**).

C-2: Most recent U.S. Geological Survey topographic map, 7-1/2 minute series, showing the waste facility boundary; the property boundary; surface drainage channels; existing utilities and structures within one-fourth mile of the site; and the direction of the prevailing winds (R315-310-4(2)(a)(ii))(See **Appendix B, C, D, E**).

D- ENGINEERING REPORT- PLANS, SPECIFICATIONS, AND CALCULATIONS

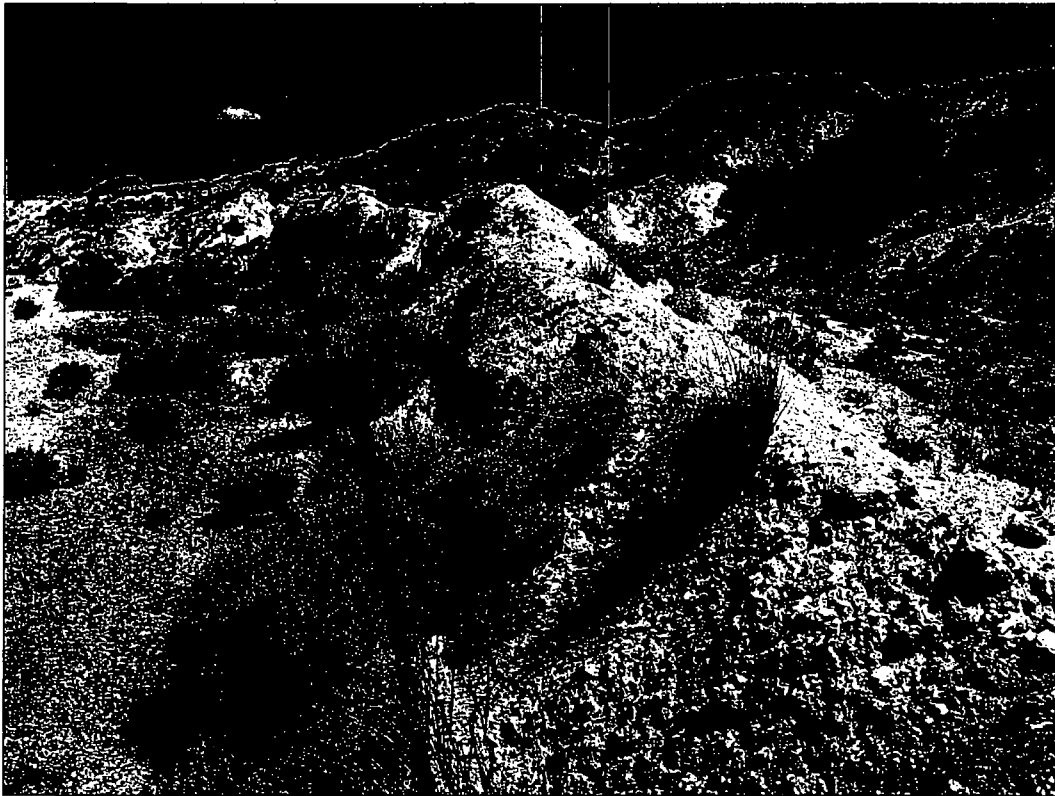
D-1 Cell design, cover design, fill methods, elevation of final cover including plans and drawings (R315-310-3(1)(b)):

D-1-1: During the mining operation at the N-1 Pit, shale was stripped from the sides of the exposed gypsum bed along the ridge. This material will be utilized as cover for

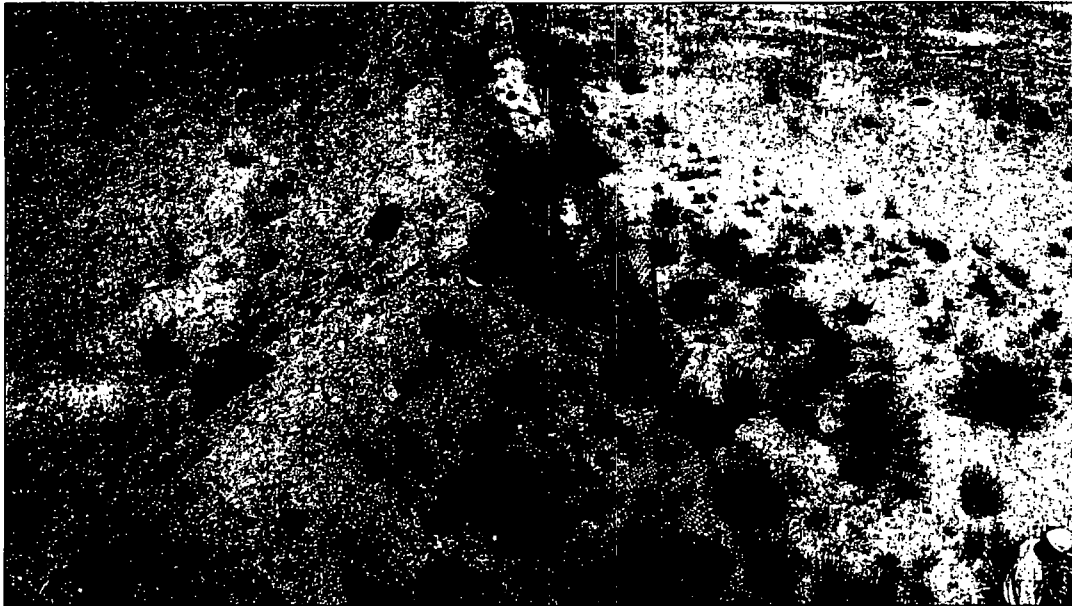
operational purposes. After the N-1 Pit has been filled to capacity, decomposed shale, gypsite, and available topsoil will be utilized for the required two feet of cover (**See Appendix S**). The entire disturbed area will be recontoured and all necessary drainage will be reestablished. To encourage plant growth, native species of big sagebrush, shadscale, rabbit brush, four wing salt brush, and Indian rice grass will be planted along with 200 lbs/acre of Diammonium Phosphate Fertilizer in order to provide the necessary nutrients. After the area is contoured, seed is spread by hand, and then the ripper of the Bulldozer is used to till in the seed.

D-2 Design and location of run-on and run-off control systems (R315-310-5(2)(b)):

D-2-1: As mentioned in B-6-1, the design and location of the landfill is such that run-on and run-off will not be a problem. (See pictures 5 & 6) Berms will be formed around the Landfill Phases 2, 3, and 4 before any filling takes place.



Picture 5: The landfill is surrounded with either hills or berms. Photo taken 8/24/07



Picture 6: Berms on the west hillside prevent any run-on. The Phase 1 landfill is on the right of the picture. Photo taken 8/24/07

E- CLOSURE PLAN (r315-310-3(1)(h) and R315-310-5(2)(c))

E-1 Closure schedule (R315-310-4(2)(d)(i)):

E-1-1: Using the current rate of fill, as reported in B-1&2&3-1, Sigurd's Phase 1 landfill will close during the year 2046. U.S. Gypsum will utilize equipment and manpower from the active mining operation to complete all reclamation required.

E-2 Design of final cover (R315-310-4(2)(c)(iii) and R315-305-3(5)):

E-2-1: There will be 2 feet of "cap", 6 inches of which will be typical indigenous topsoil. The Code of Solid Waste Disposal Regulations adopted by Utah Solid and Hazardous Waste Committee will be followed in regards to this requirement and all other Class III landfill regulations. Due to ongoing mining operations in the near vicinity, the following equipment will be available for excavation, compaction, spreading, and other related activities.

- Two (2) Front-end loaders
- Two (2) Haul trucks (40 & 35 ton)
- Two (2) Bulldozers with rippers
- Road Grader
- Backhoe

E-3 Capacity of site in volume and tonnage (R315-310-4(2)(d)(ii)):

E-3-1: U.S. Gypsum's, Sigurd Plant Phase 1 landfill has a total site capacity of 315,247 cubic yards or 63,049 tons. Current fill to date is 190,765 cubic yards, or 38,153 tons. Remaining capacity is 124,482 cubic yards, or 24,896 tons. The Phase 2 landfill has an estimated capacity of 42,302 tons, or 211,511 cubic yards based on Phase 1's acreage-volume percentage. The Phase 3 landfill has an estimated capacity of 35,162 tons, or

175,811 cubic yards. The Phase 4 landfill has an estimated capacity of 46,546 tons, or 232,730 cubic yards.

E-4 Final inspection by regulatory agencies (R315-310-4(2)(c)(iii):

E-4-1: Final inspection will be performed by the appropriate regulatory agencies.

F- POST-CLOSURE PLAN (R315-310-3(1)(h))

F-1 Site monitoring, if required (R315-310-4(2)(e)(i)):

F-1-1: A Class IIIB landfill is exempt from the normal water monitoring requirements of Rule R315-308, as per Solid Waste Permitting and Management Rules R315-304-5,4(c).

F-2 Changes to record of title, land use, and zoning restrictions (R315-310-4(2)(e)(ii)):

F-2-1: No zoning exists on the site. The general surrounding area is controlled by the Bureau of Land Management as a multiple use area. The County Records Office will be notified in writing of any changes or when the landfill is closed so they can make note of it.

F-3 Maintenance activities to maintain cover and run-on/run-off control systems (R315-310-4(2)(e)(iii)):

F-3-1: Existing Design and location should prevent run-on or run-off and keep the final cover from eroding. To ensure maintenance, the site will be inspected annually, even if the plant shuts down and the company flies someone in. If repairs are required, then the plant or a contractor will do them.

F-4 List the name, address, and telephone number of the person or office to contact about the facility during the post-closure care period (R315-310-4(2)(e)(v)):

F-4-1: If you have any questions currently or during the post closure/closure, please contact the following person:

Clay Shumway- Quarry/Mill Manager
81 North State Street
Work # (435) 896-2431
Fax#: (435) 896-2458

G- FINANCIAL ASSURANCE (R315-310-3(1)(j))

G-1 Identification of closure costs including cost calculations (R315-310-4(2)(d)(iv)):

G-1-1: Closure costs and calculations for the Phase 1 landfill are included in **Appendix T** and come to a total cost of \$395,171.

G-2 Identification of post-closure care costs including cost calculations (R315-310-4(2)(e)(iv)):

G-2-1: Post-closure care costs are \$120,000 (**Appendix T**). Once the closure of the site is done, there should be no further work required and there is no hazardous material or gases that would require any monitoring. The design and location are sufficient that there should be no problems of run-on or run-off that would require additional work or costs. However, the post closure costs have been estimated to include an annual inspection for

30 years and assuming a worst case scenario of extreme flooding every 10 years that would require some repair work.

G-3 Identification of the financial assurance mechanism that meets the requirements of Rule R315-309 and the date the mechanism will become effective (R315-309-1(1)):

G-3-1: A letter of credit will be issued as financial assurance per requirements above and will be effective on the date indicated on the letter. (See Appendix U)

H- SPECIAL REQUIREMENTS FOR A CLASS IIIa LANDFILL (R315-304-5(7)(b))

H-1 A geohydrological assessment of the site (R315-310-4(2)(b))

H-2 An engineering report, plans, specifications, and calculations (R315-310-4(2)(c))

H-3 A ground water monitoring plan (R315-304-5(4) and R315-310-4(2)(c)(vi))

H-4 A closure plan that meets the requirements of R315-303-3(4)(R315-304-5(2)(a))

H-1&2&3&4-1 This is an application for a Class IIIb Landfill

APPENDIX

- A. October 27, 1993 State of Utah Division of Oil, Gas, and Mining Variance Approval Letter
- B. Sigurd Quadrangle, Utah- Sevier Co., 7.5 Minute Series Topographic with Jumbo Class III Landfill Location
- C. Detail of Jumbo Class III Solid Waste Landfill and Proof of Ownership
- D. Detail of Jumbo Class III Solid Waste Landfill and Google Earth Photos of Landfill.
- E. Typical Cross Section of Jumbo Class III Solid Waste Landfill
- F. U.S. Gypsum Landfill Tonnage Record
- G. Daily Quarry Inspection Record (Landfill is included in this inspection)
- H. Sheetrock Gypsum Panel MSDS
- I. Sheetrock Brand Topping Joint Compound Ready Mix MSDS
- J. Sheetrock Topping Joint III Compound Ready Mixed MSDS
- K. Sheetrock Lightweight All Purpose Joint Compound Plus 3 Ready Mixed MSDS
- L. Sheetrock Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control MSDS
- M. Sheetrock Two-Purpose Joint Compound- Total Ready Mixed MSDS
- N. Sheetrock Lightweight Topping Joint Compound Topping Lite Ready Mix MSDS
- O. Sheetrock Taping Joint Compound
- P. Sheetrock All Purpose Joint Compound MidWeight Ready Mixed MSDA
- Q. Total Light Joint Compound- Ready Mixed MSDS
- R. Mine Safety Health Administration Training Program
- S. Drawing of Final Cover
- T. Closure Cost Estimate
- U. Financial Assurance

APPENDIX A



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

RECEIVED

OCT 29 1993

U.S. GYPSUM
SIGURD, UTAH 84657

October 27, 1993

Mr. Larry Pawlosky
Quarry/Mill Manager
U. S. Gypsum
P. O. Box 160
Sigurd, Utah 84657-0160

Re: Approval of Plan Amendment - Solid Waste Landfill/Dump Proposal, U. S. Gypsum, Jumbo-Jensen Quarry, M/041/008, Sevier County, Utah.

Dear Mr. Pawlosky:

Thank you for your August 20, 1993, letter which forwarded a Notice of Intention to Revise Mining Operations. The notice proposes a permit amendment to construct a solid waste landfill. Your application meets the requirements of the Utah Mined Land Reclamation Act and Minerals rules. The Division hereby approves of your landfill proposal *with the following condition*:

The construction of a solid waste dump/landfill facility may require acquisition of a solid waste permit from the Utah Department of Environmental Quality/Division of Solid and Hazardous Waste (DSHW). Please contact Roy Van Os, (801) 538-6170, of DSHW for information regarding their permitting requirements.

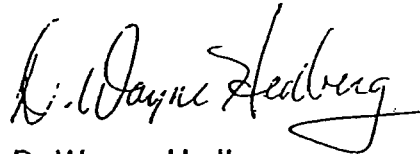
If DSHW requires a permit for this proposal, then U. S. Gypsum agrees to provide DOGM with written notification that a plan (permit application) has been filed with DSHW, for the construction of a solid waste landfill/dump.

Our approval will become effective upon U. S. Gypsum's receipt of all appropriate permits/approvals for this proposal. Please copy this office with any correspondence (cover letter only), related to the landfill, that is sent to DSHW.

Page 2
Mr. Larry Pawlosky
M/041/008
October 27, 1993

Thank you for your patience and assistance in finalizing this permitting action. Please contact me, Holland Shepherd, or Travis Jones of my staff, should you have any remaining questions or concerns in this regard.

Sincerely



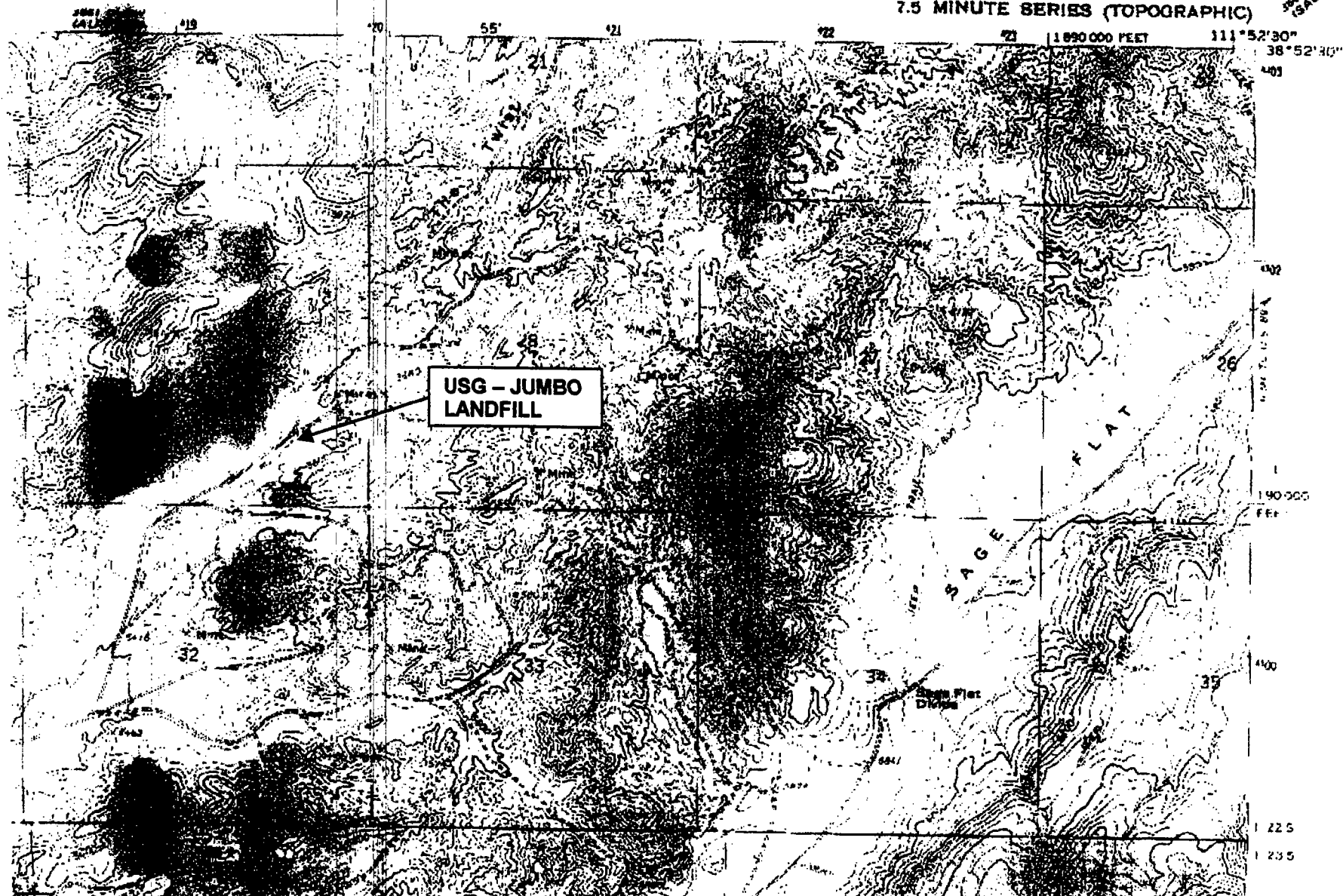
D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
cc: Roy Van Os, Div Solid & Hazardous Waste
Travis Jones, DOGM
Holland Shepherd, DOGM
M041008.amd

APPENDIX B

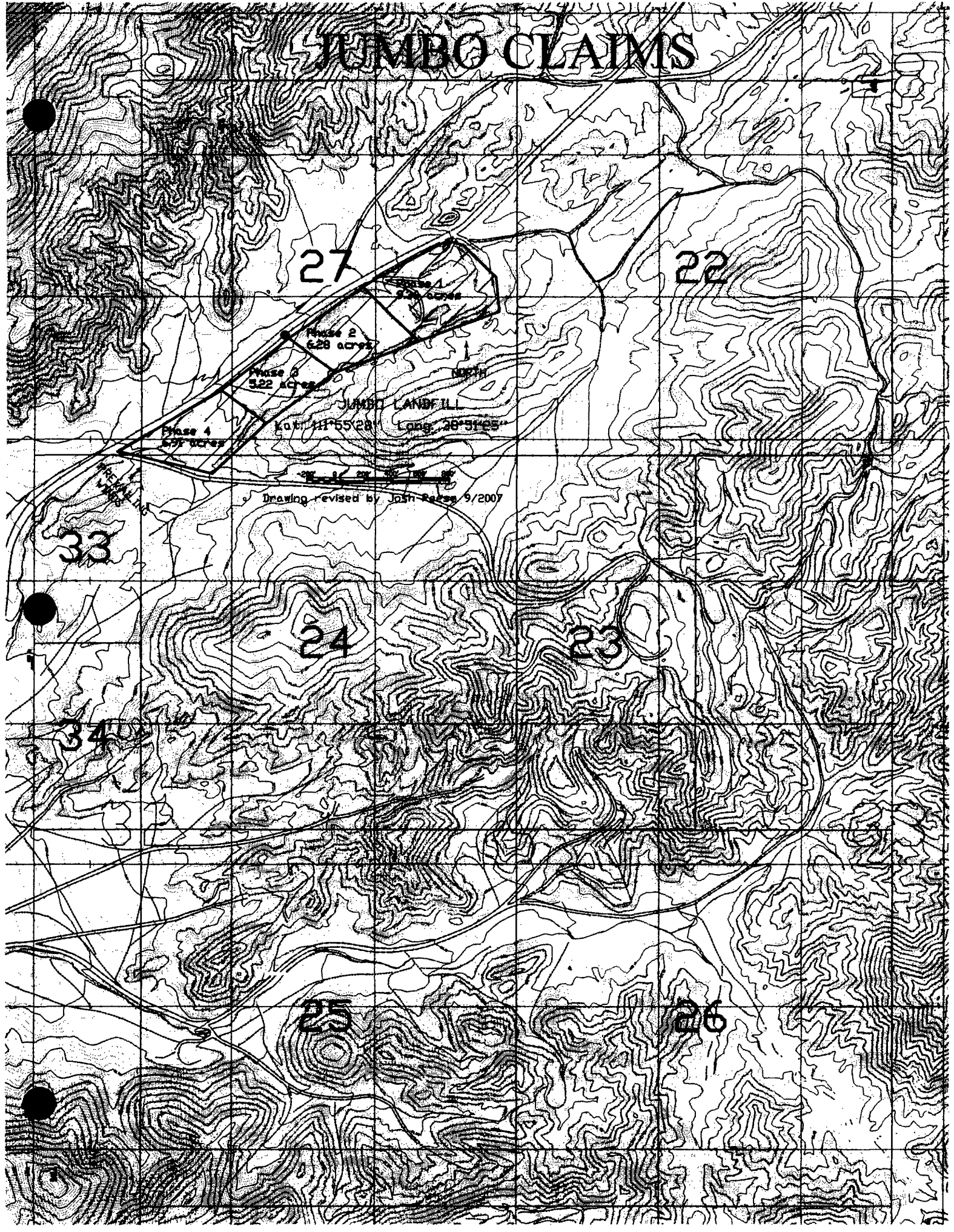
SIQUARD QUADRANGLE
UTAH-SEVIER CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

500' IN NE
(SALINA)



APPENDIX C

JUMBO CLAIMS



27

22

24

23

26

25

33

34

27

Phase 1
9.36 acres

Phase 2
6.28 acres

Phase 3
5.22 acres

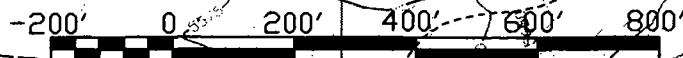
Phase 4
6.91 acres



JUMBO LANDFILL

Lat. $111^{\circ}55'28''$

Long. $38^{\circ}51'25''$



Drawing revised by Josh Reese 9/2007

PREVAILING
WINDS

D E E D

JUMBO PLASTER & CEMENT COMPANY, a Utah corporation, with its principal office at Richfield, Utah, GRANTOR, hereby grants, bargains, sells, remises, releases and forever quit-claims to UNITED STATES GYPSUM COMPANY, an Illinois corporation, with its principal office at Chicago, Illinois, GRANTEE, for the sum of Ten (\$10.00) Dollars and other valuable consideration, the receipt of which is acknowledged by the Grantor, all of the right, title and interest of the Grantor in and to the following described placer mining claims situate in Township 22 South, Range 1 West, Salt Lake Base and Meridian in an unorganized mining district, Sevier County, State of Utah, and all of the right, title and interest of the Grantor in and to the property covered thereby whether by virtue of the said placer mining locations or any other placer mining locations or otherwise:

p / Jumbo Gypsum No. 22 placer mining claim embracing the SW $\frac{1}{4}$ of Section 28;

p / Jumbo Gypsum No. 23 placer mining claim embracing the NW $\frac{1}{4}$ of Section 33;

p Jumbo Gypsum No. 24 placer mining claim embracing the NE $\frac{1}{4}$ of Section 32;

p Jumbo Gypsum No. 25 placer mining claim embracing the SE $\frac{1}{4}$ of Section 32;

p Jumbo Gypsum No. 26 placer mining claim embracing the SW $\frac{1}{4}$ of Section 33;

p Jumbo Gypsum No. 27 placer mining claim embracing the SE $\frac{1}{4}$ Section 29;

p Jumbo No. 33 placer mining claim embracing the E $\frac{1}{2}$ of NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Section 32;

p Jumbo No. 34 placer mining claim embracing the E $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$ Section 32.

Together with all minerals therein and all privileges and franchises and appurtenances thereto incident or belonging or therewith used and enjoyed, and all the estate, right, title, interest, property, claim and demand whatsoever, legal and equitable, as well in possession as in expectancy of the Grantor in or to said premises and every part thereof.

WITNESS the hand of said Grantor this 17th day of December, 1936.

JUMBO PLASTER & CEMENT COMPANY

By W. P. Lyons
President

By Carroll Lyons
Secretary



STATE OF UTAH

COUNTY OF SEVIER

)
: SS
)

On the 17th day of December , A. D. 1936, personally appeared before me W. P. Payne and Carroll Payne, known to me to be the President and Secretary respectively, of the Jumbo Plaster & Cement Company, the signers of the above instrument, who duly acknowledged to me that they executed the same, for and in behalf of said Jumbo Plaster & Cement Company, by due and legal authority vested in them as President and Secretary thereof.

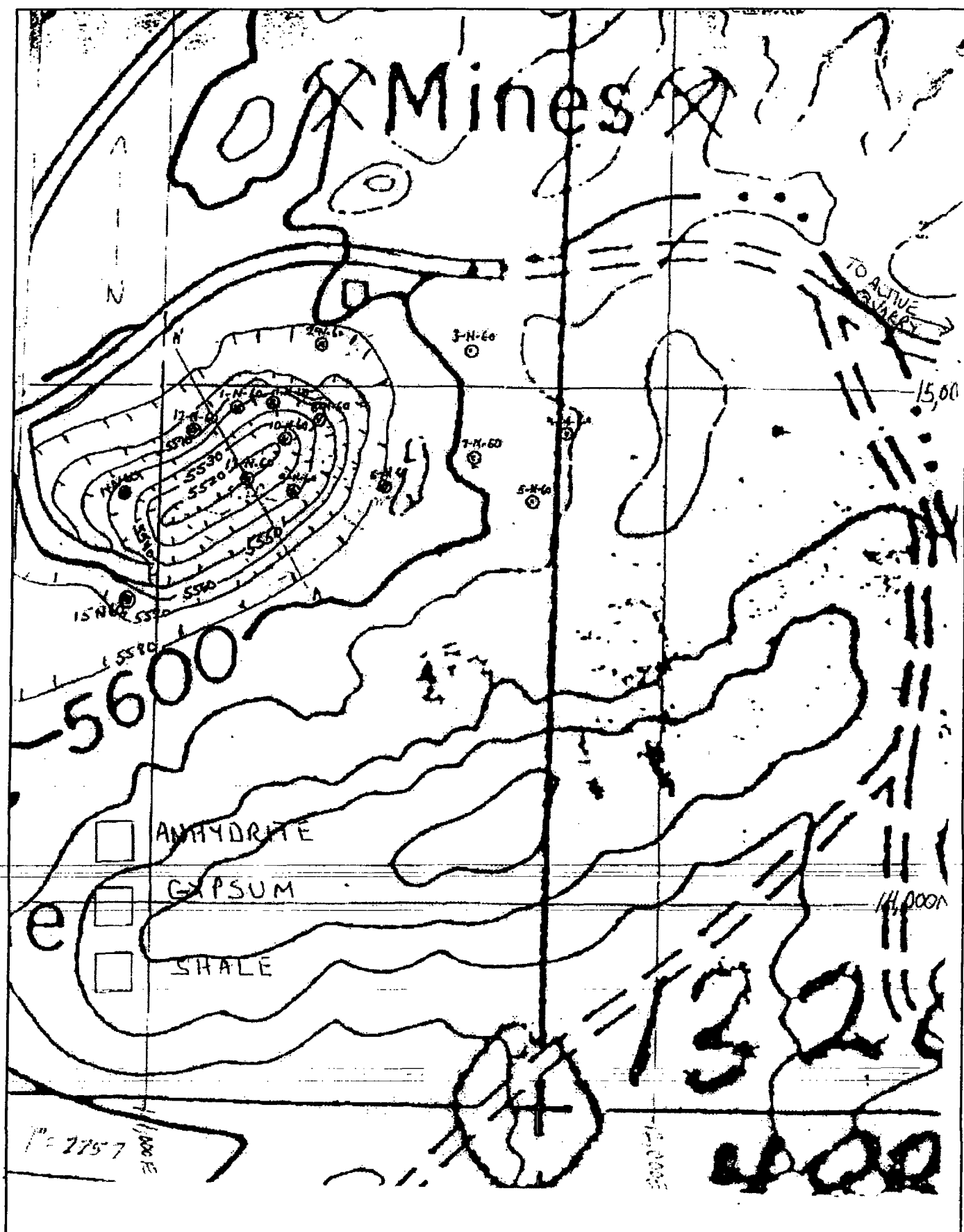
My commission expires:

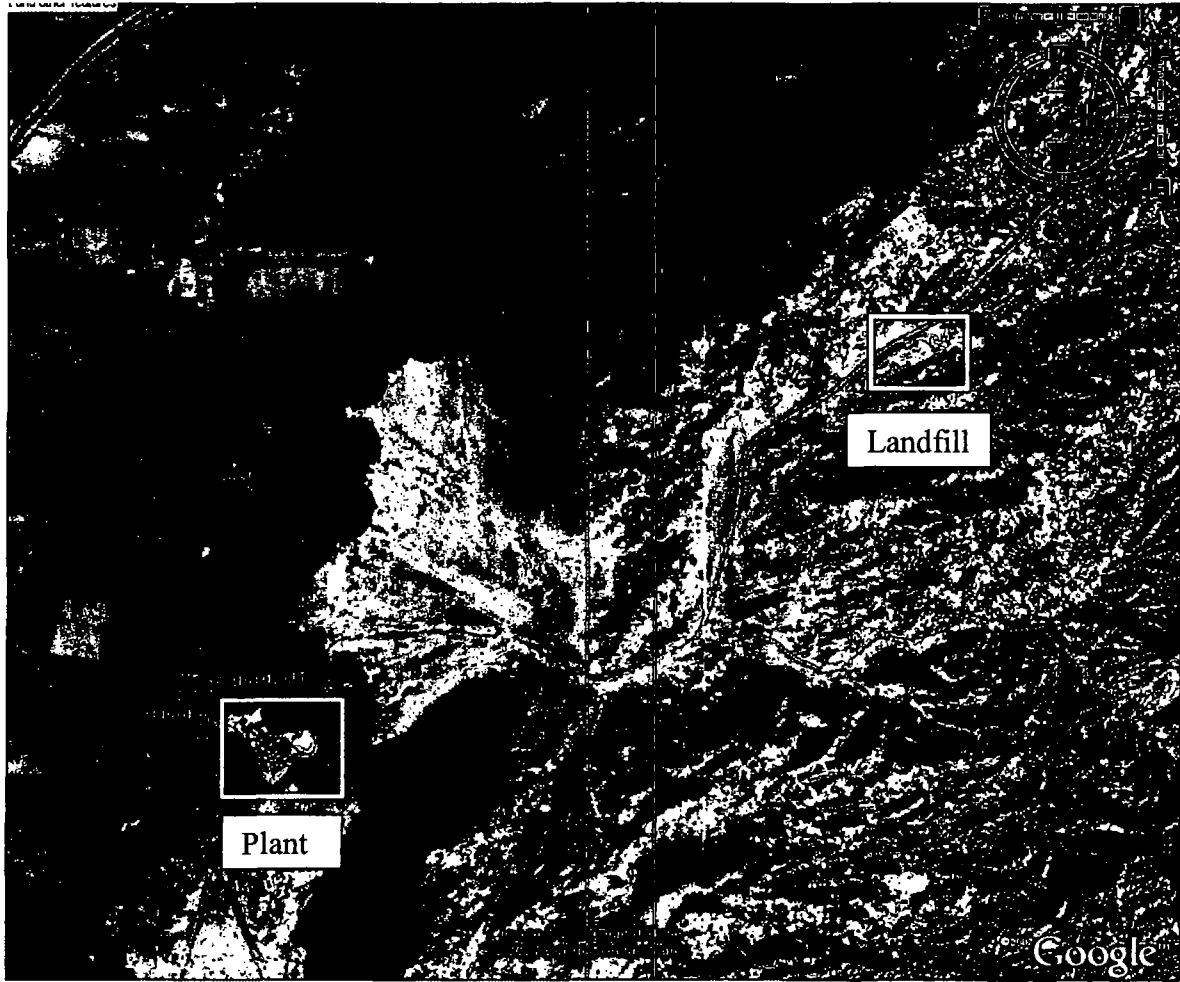
April 16, 1937.

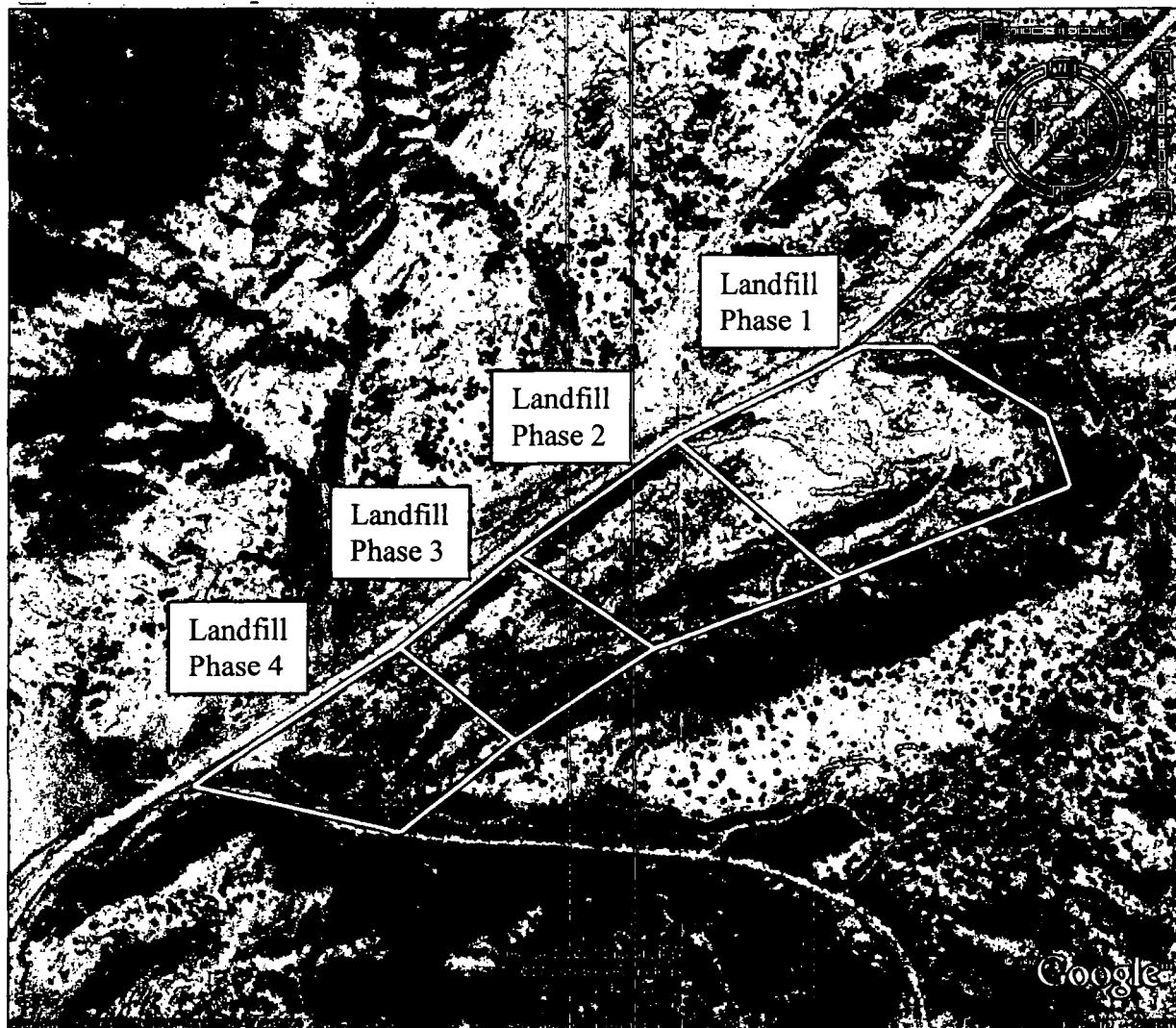
Dorothy Baker

Notary Public, residing at
Richfield, Utah.

APPENDIX D

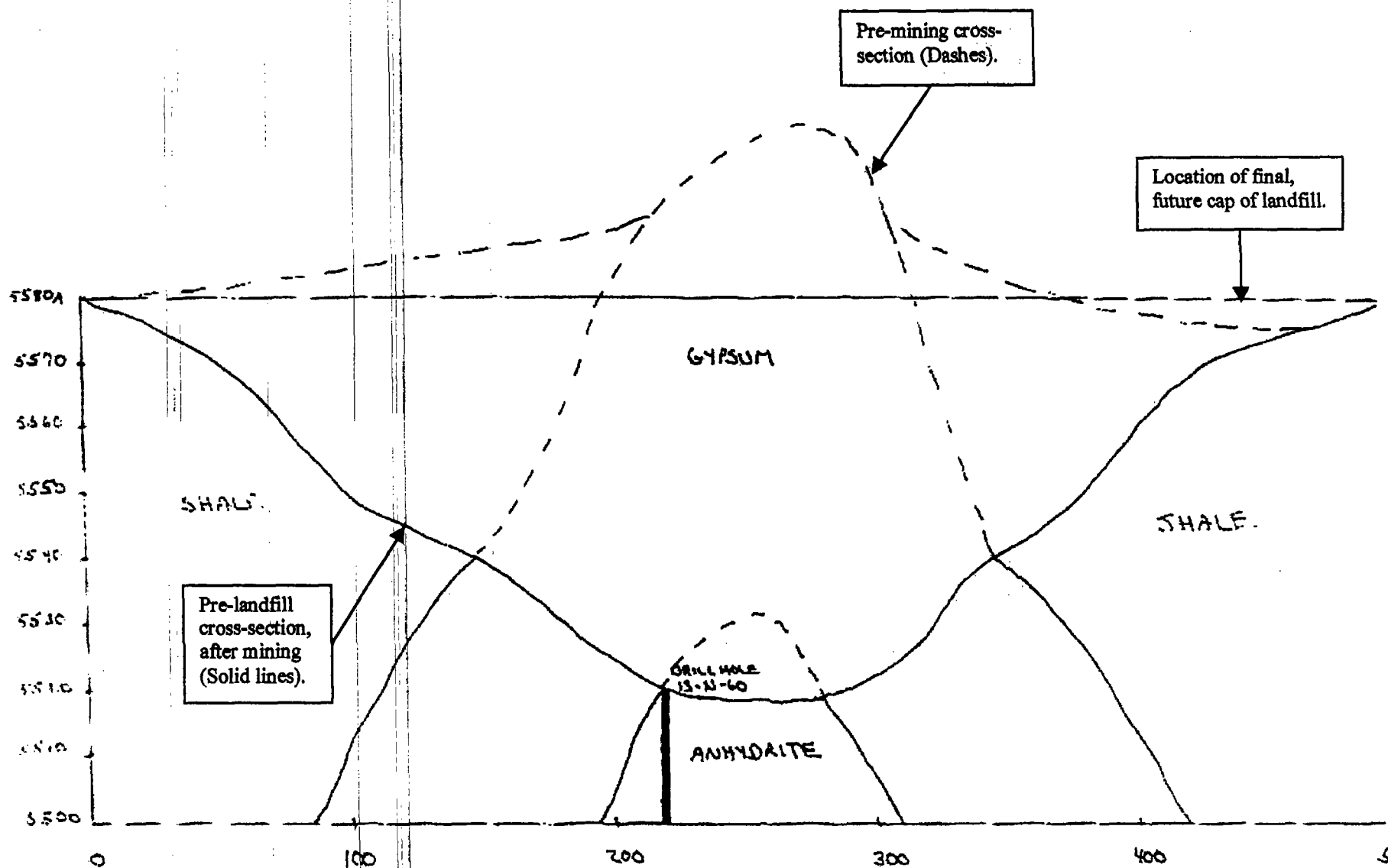






APPENDIX E

TYPICAL CROSS SECTION A-A'



APPENDIX F

[illegible]

APPENDIX G

Date: _____

Daily Quarry Inspection

PIT NAME					
Ground Control Inspection:					
Corrections:					
Explosives Magazine Inspection:					
Corrections:					
Blasted Muck Pile Inspections:					
Corrections:					
Drill Area Inspection:					
Corrections:					
HAULAGE INSPECTION:					
Trimming Loads:					
Berms:					
Operating Speeds:					
Dust Control:					
Equipment Parking:					
Housekeeping					
LANDFILL INSPECTION:					
Gate secured during off hours?					
Any improper materials?					
Anyone trespassing?					
Hazards in dump?					
Condition of road					
Fugitive Dust Concerns?					
Run-off Concerns?					
If dump closed, is cover intact?					
Tons of material disposed:					

COMMENTS:

APPENDIX H



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 9, 2003
Version: 4

SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Gypsum Panels
SYNONYM: Gypsum board

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Gypsum (CaSO ₄ •2H ₂ O)	>85	10	15 (T) / 5 (R)	13397-24-5
Cellulose	<10	10	15 (T) / 5 (R)	9004-34-6
Starch	<3	10	15 (T) / 5 (R)	9005-25-8
Crystalline Silica	<1	0.05 (R)	0.1 (R)	14808-60-7
May Contain:				
Fibrous Glass (Continuous Filament)	<1	1 f/cc	15 (T) / 5 (R)	65997-17-3
May be available with foil-backing:				
Aluminum Foil (as Aluminum and Compds)	<3	10	15 (T) / 5 (R)	7429-90-5
Ethylene Vinyl Acetate Polymer	<2	(NE)	(NE)	24937-78-8

(T) – Total (R) – Respirable (NE) – Not Established

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room.

The weight percent for fibrous glass (continuous filament) represents total fibrous glass and not the respirable fraction.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

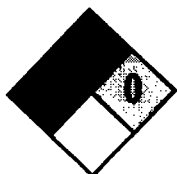
All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

SECTION 3 HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0

	*	0
		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		E

0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye protection. Use gloves and NIOSH/MSHA-approved respiratory protection when required.

*Respirable crystalline silica can cause lung disease and/or cancer.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001

Page 2 of 8

SECTION 3 HAZARD IDENTIFICATION (continued)

EMERGENCY OVERVIEW

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.

ACUTE:

Eyes: Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: No toxic effects from powdered gypsum are noticed where air contains contaminate to excess. This material exhibits some affinity for moisture, and frequent exposures may have a drying effect on the skin. Possible itching and irritation may be experienced. This may lead to dermatitis. No penetration of intact skin.

Inhalation: Inhalation of dust can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: Unlikely to occur, but may cause gastric disturbances if swallowed. Gypsum is non-toxic; however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. See First Aid Measures - Ingestion (Section 4).

CHRONIC:

Inhalation: The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 Wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room.

Gypsum wallboard panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Eyes: None known.

Skin: Prolonged and repeated exposure may dry skin and possibly lead to dermatitis.

Ingestion: No known effects.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: No harmful effects expected. No specific recommendations. Calcium sulfate is nontoxic; however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. If gastric disturbance occurs, call physician. Drinking gelatin solutions or large volumes of water may delay setting.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 3 of 8

SECTION 6 FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire and Explosion Hazards:	None		
Hazardous Combustion Products:	Above 1450° C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO ₂). Organic material in the panels can produce oxides of carbon.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Limited combustible
Upper Flammable Limit (UFL):	Not Applicable	Classification:	
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8). Collect the material from spillage and if not damaged or contaminated by foreign material, gypsum panels may be reclaimed. Contain the spill by keeping it dry and away from incompatibles (See Section 10).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. If dry, shovel or sweep up material from spillage and place collected material into a container for recovery or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposures. If washed down, may plug drains.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7 HANDLING AND STORAGE

HANDLING:

Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8).

Minimize dust generation and accumulation. Use good safety and industrial hygiene practices.

When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4' extends beyond the supports on either end.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the jobsite.

Gypsum panels are very heavy awkward loads posing the risk of severe back injury. Use proper lifting techniques.



SECTION 7 HANDLING AND STORAGE (continued)

STORAGE:

Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).

Protect product from physical damage.

Protect from weather and prevent exposure to sustained moisture.

Gypsum Association literature recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Good general ventilation should be sufficient to control airborne dust levels.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2).

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves [chemical gloves are not necessary, there is no chemical irritation hazard] and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Paper with gray to off white core	Odor	Low to no odor
Physical State	Solid	pH @ 25 ° C	~ 7
Vapor Pressure	Not Applicable	Vapor Density (Air = 1)	Not Applicable
Boiling Point	Not Applicable	Vapor Pressure (mm Hg)	Not Applicable
Freezing Point	Not Applicable	Evaporation Rate (BuAc = 1)	Not Applicable
Melting Point	1450° C - decomposes	Percent Volatile	0
Softening Point	Not Applicable	Particle Size	Not Applicable
Solubility (H₂O)	0.26/100g	Molecular Weight	~ 172
Viscosity	Not Applicable	Bulk Density	~ 55 lb/ft ³
Specific Gravity (H₂O = 1): 2.32 – 2.96			



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001

Page 5 of 8

SECTION 10 CHEMICAL STABILITY AND REACTIVITY

STABILITY:	Stable in dry environments.
CONDITIONS TO AVOID:	Contact with incompatibles.
INCOMPATIBILITY:	None known.
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION:	Above 1450° C - calcium oxide (CaO) and sulfur dioxide SO ₂ . Oxides of carbon.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Gypsum paste applied experimentally to the eyes of rabbits was not an irritant.

Gypsum dust particulate has shown an irritant action on mucous membranes of the respiratory tract and eyes.

There have been anecdotal reports of conjunctivitis, chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose, and reactions of tracheal and bronchial membranes in exposed workers.

The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses.

Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters.

No evidence of mutagenicity was found in Ames bacterial tests.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 Wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room.

Gypsum wallboard panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity Values: Not determined.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 6 of 8

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Gypsum (CaSO ₄ •2H ₂ O)	>85	NL	NL	NL	NL	NL	NL
Cellulose	<10	NL	NL	NL	NL	NL	NL
Starch	<3	NL	NL	NL	NL	NL	NL
Crystalline Silica	<1	NL	NL	NL	NL	NL	NL
May Contain:							
Fibrous Glass (Continuous Filament)	<1	NL	NL	NL	NL	NL	NL
May be available with foil-backing:							
Aluminum Foil (as Aluminum and Cmpds)	<3	NL	NL	X	NL	NL	NL
Ethylene Vinyl Acetate Polymer	<2	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 7 of 8

SECTION 15 REGULATORY INFORMATION (continued)

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Gypsum (CaSO ₄ •2H ₂ O)	>85	Not Listed	Not Listed
Cellulose	<10	Not Listed	Not Listed
Starch	<3	Not Listed	Not Listed
Crystalline Silica	<1	1406	D2A
May Contain:			
Fibrous Glass (Continuous Filament)	<1	Not Listed	Not Listed
May be available with foil-backing:			
Aluminum Foil (as Aluminum and Cmpds)	<3	47	Not Listed
Ethylene Vinyl Acetate Polymer	<2	Not Listed	Not Listed

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 8 of 8

SECTION 16 OTHER INFORMATION

Label Information

ΔWARNING!

Follow good safety and industrial hygiene practices during the handling and installing of all products and systems. Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not ingest. If ingested, call physician. Panels are heavy and can fall over, causing serious injury or death. Avoid creating a tripping hazard and do not exceed floor limit loads.

Product safety information: (800) 507-8899 or www.usg.com **KEEP OUT OF REACH OF CHILDREN.**

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety
USG Corporation
125 South Franklin St.
Chicago, Illinois 60606

END

APPENDIX I



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 5

SECTION 1

CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Topping Joint Compound Ready Mixed
CHEMICAL FAMILY: An aqueous mixture of minerals and an emulsion polymer

SECTION 2

COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>50	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Or Gypsum (CaSO ₄ •2H ₂ O)		10	15 (T) / 5 (R)	13397-24-5
Water	<35	(NE)	(NE)	7732-18-5
Mica	<5	3 (R)	20 mppcf	12001-26-2
Attapulgite	<5	(NE)	(NE)	12174-11-7
Vinyl Acetate Polymer	<5	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7
May Contain:				
Talc	<5	2 (R)	20 mppcf	14807-96-6

(T) – Total (R) – Respirable (NE) – Not Established mmpcf - million particles per cubic foot of air

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List.

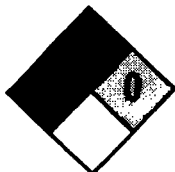
SECTION 3

HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0

	*	0
		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		E

0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator
Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis).

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001

Page 2 of 8

SECTION 9 HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 3 of 8

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7 HANDLING AND STORAGE

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 4 of 8

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H ₂ O)	Slight, unlimited dispersibility
Specific Gravity	1.3-1.4	Particle Size	99% Finer than 250 microns
Softening Point	Not Applicable	Evaporation Rate	Not Applicable
Viscosity	450-700 Brabender Units at 20 °C	Bulk Density	1.3-1.4 Kg/Litre
Percent Volatile	48-50	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10

CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 1450° C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready

Mixed

MSDS # 61-370-001

Page 5 of 8

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

SECTION 12

ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13

DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 6 of 8

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>50	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Or Gypsum (CaSO ₄ •2H ₂ O)		NL	NL	NL	NL	NL	NL
Water	<35	NL	NL	NL	NL	NL	NL
Mica	<5	NL	NL	NL	NL	NL	NL
Attapulgit	<5	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<5	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL
May Contain:							
Talc	<5	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready

Mixed

MSDS # 61-370-001

Page 7 of 8

SECTION 15 REGULATORY INFORMATION (continued)

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>50	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Or Gypsum (CaSO ₄ •2H ₂ O)		Not Listed	Not Listed
Water	<35	Not Listed	Not Listed
Mica	<5	1088	Not Listed
Attapulgite	<5	Not Listed	Not Listed
Vinyl Acetate Polymer	<5	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A
May Contain:			
Talc	<5	Not Listed	D2A

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready

Mixed

MSDS # 61-370-001

Page 8 of 8

SECTION 16 OTHER INFORMATION

Label Information

ΔWARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis). Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

Threshold Limit Value

TLV	Permissible Exposure Limit
PEL	Chemical Abstracts Service (Registry Number)
CAS	National Institute for Occupational Safety and Health
NIOSH	Mine Safety and Health Administration
MSHA	Occupational Health and Safety Administration
OSHA	American Conference of Governmental Industrial Hygienists
ACGIH	International Agency for Research on Cancer
IARC	United States Department of Transportation
DOT	United States Environmental Protection Agency
EPA	National Fire Protection Association
NFPA	Hazardous Materials Identification System
HMIS	Personal Protection Equipment
PPE	Toxic Substances Control Act
TSCA	Canadian Domestic Substances List
DSL	Canadian Non-Domestic Substances List
NDSL	Superfund Amendments and Reauthorization Act of 1986
SARA	Resource Conservation and Recovery Act
RCRA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERCLA	United Nations/North America number
UN/NA#	Code of Federal Regulations
CFR	Workplace Hazardous Material Information System
WHMIS	

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX J

06153
Page 1/4**MATERIAL SAFETY DATA SHEET**United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60606-4678Date Issued: January 31, 1996
Product Safety: (800) 507-8899**SECTION I****PRODUCT: SHEETROCK® Topping Joint III Compound
Ready Mixed****CHEMICAL FAMILY: Aqueous mixture of limestone and latex****SECTION II
INGREDIENTS**

MATERIAL	Wt%	TLV mg/m³	PEL mg/m³	CAS NUMBER
Limestone	>50	10	15(T)/5(R)	1317-65-3
Water	<35	(NE)	(NE)	7732-18-5
Expanded perlite	<5	10	15(T)/5(R)	93763-70-3
Mica	<5	3(R)	3(R)	12001-26-2
Attapulgate	<5	(NE)	(NE)	12174-11-7
Vinyl acetate polymer	<5	(NE)	(NE)	9003-20-7
Silica-Crystalline, Respirable	trace	0.1(R)	0.1(R)	14808-60-7

(T) - Total (R) - Respirable (NE) - Not Established

***** This is a Non-Asbestos Product. *****

**SECTION III
PHYSICAL DATA**

BOILING POINT:	Approx. 212° F
SPECIFIC GRAVITY (H₂O = 1):	1.6
APPEARANCE AND ODOR:	Off white paste; low odor.
HARDENING TIME:	Varies. Check usage and/or product specification data for product.



SHEETROCK® Topping III Joint Compound, Ready Mixed

Page 2/4

**SECTION IV
FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED):	Noncombustible
SPECIAL FIRE FIGHTING PROCEDURES:	None
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None
SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT:	None
EXTINGUISHING MEDIA:	Use extinguishing media appropriate for surrounding fire.

**SECTION V
HEALTH HAZARD DATA**

Dust generated from this product would be considered a nuisance dust. This product can release nuisance dust if sanding. Eye, skin, nose, throat, and upper respiratory irritation can occur with prolonged exposure to dust.

EFFECTS OF OVEREXPOSURE:

ACUTE:

EYES: Direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

SKIN: May dry skin. Direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, then wash skin thoroughly with mild soap and water. If irritation persists, consult physician.

INHALATION: Inhalation of dusts from this product may irritate the nose, throat, lungs, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation from dust. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

INGESTION: No known effects.

CHRONIC: This material displays no specific toxic properties.

EYES: None known.

SKIN: None known.

INHALATION: Chronic overexposure to respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. Long-term inhalation of large amounts of respirable mica dust can cause lung damage (pneumoconiosis or pulmonary fibrosis).

INGESTION: No known effects.



SHEETROCK® Topping III Joint Compound, Ready Mixed

Page 3/4

**SECTION V
HEALTH HAZARD DATA
(Continued)**

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush thoroughly with water for 15 minutes to remove particles.

If irritation persists, consult physician.

SKIN: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing.

INHALATION: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

INGESTION: No harmful effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, and respiratory system.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTE OF ENTRY: Inhalation; Eye and/or Skin contact.

CARCINOGENICITY OF INGREDIENTS:

MATERIAL	IARC	NTP	OSHA
Respirable Crystalline Silica	2A	Anticipated	Not Listed

The quantity of respirable crystalline silica has not been determined in this product. Respirable crystalline silica is classified by IARC as a (2A) probable human carcinogen. Long-term breathing of large amounts of silica can cause lung disease (i.e., silicosis) and/or possibly lung cancer.

**SECTION VI
REACTIVITY DATA**

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY: None known.

HAZARDOUS DECOMPOSITION: CO₂ would be produced at high temperatures with the decomposition of limestone (~800°C).

**SECTION VII
SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear appropriate protective equipment. Shovel material from spillage into a waste container for disposal, or if not contaminated by foreign material it may be reclaimed for processing.

WASTE DISPOSAL METHOD: Dispose of material in accordance with Federal, State, and Local regulations.



SHEETROCK® Topping III Joint Compound, Ready Mixed

Page 4/4

SECTION VIII SPECIAL PROTECTION INFORMATION

No TLV assigned to this mixture, see Ingredients Section. Minimize exposures in accordance with good hygiene practice.

RESPIRATORY PROTECTION: Not typically necessary under normal conditions of use. Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients and to control dusting conditions. Avoid creating dust. Wear a NIOSH/MSHA- approved respirator in poorly ventilated areas, if TLV is exceeded, and/or when dusty conditions exist to guard against nuisance particles. Dust created from dry sanding may cause eye, nose, throat or upper respiratory irritation.

VENTILATION: Ventilate to keep exposures below TLV. General ventilation is expected to be satisfactory. Use local exhaust ventilation if necessary to control dust.

PROTECTIVE EQUIPMENT: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. Wear adequate clothing to minimize chafing or drying of skin. Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Minimize exposures in accordance with good hygiene practice. During handling wear the appropriate respiratory, eye and skin protection if warranted per environmental conditions.

When finishing joints using these products, wet-sanding is recommended. See "Finishing and Decorating Gypsum Panels - Wet Sanding, J-610/12-87". Avoid freezing.

Δ WARNING

Dust can be generated during sanding. Dust may cause eye, skin, nose, throat, or respiratory irritation. Avoid inhalation of dust and eye contact. Prolonged and repeated exposures of mica dust may cause lung disease. Avoid generating dust by wet-sanding. If dusty, wear a NIOSH/MSHA-approved respirator. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not ingest. If ingested and any discomfort occurs, call physician. Product safety information: (800) 507-8899.

KEEP OUT OF REACH OF CHILDREN.

APPENDIX K



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 6

SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed
CHEMICAL FAMILY: An aqueous mixture of minerals and an emulsion polymer

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>35	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Or Gypsum (CaSO ₄ •2H ₂ O)		10	15 (T) / 5 (R)	13397-24-5
Water	>40	(NE)	(NE)	7732-18-5
Expanded Perlite	<10	10	15 (T) / 5 (R)	93763-70-3
Vinyl Acetate Polymer	<10	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Attapulgate	<5	(NE)	(NE)	12174-11-7
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

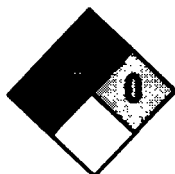
All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List.

SECTION 3 HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

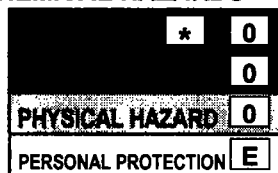
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint
Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 2 of 8

SECTION 3 HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4

FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 3 of 8

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7 HANDLING AND STORAGE

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint
Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 4 of 8

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.3-1.4	Particle Size	99% Finer than 250 microns
Softening Point	Not Applicable	Evaporation Rate	Not Applicable
Viscosity	450-700 Brabender Units at 20 °C	Bulk Density	1.3-1.4 Kg/Litre
Percent Volatile	48-50	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10

CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 1450° C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint
Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 5 of 8

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 6 of 8

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>35	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Or Gypsum (CaSO ₄ •2H ₂ O)		NL	NL	NL	NL	NL	NL
Water	>40	NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<10	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 7 of 8

SECTION 13 REGULATORY INFORMATION (continued)

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>35	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Or Gypsum (CaSO ₄ •2H ₂ O)		Not Listed	Not Listed
Water	>40	Not Listed	Not Listed
Expanded Perlite	<10	Not Listed	D2A
Vinyl Acetate Polymer	<10	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Attapulgate	<5	Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 8 of 8

SECTION 16 OTHER INFORMATION

Label Information

⚠WARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

Key/Legend	Threshold Limit Value
TLV	Permissible Exposure Limit
PEL	Chemical Abstracts Service (Registry Number)
CAS	National Institute for Occupational Safety and Health
NIOSH	Mine Safety and Health Administration
MSHA	Occupational Health and Safety Administration
OSHA	American Conference of Governmental Industrial Hygienists
ACGIH	International Agency for Research on Cancer
IARC	United States Department of Transportation
DOT	United States Environmental Protection Agency
EPA	National Fire Protection Association
NFPA	Hazardous Materials Identification System
HMIS	Personal Protection Equipment
PPE	Toxic Substances Control Act
TSCA	Canadian Domestic Substances List
DSL	Canadian Non-Domestic Substances List
NDSL	Superfund Amendments and Reauthorization Act of 1986
SARA	Resource Conservation and Recovery Act
RCRA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERCLA	United Nations/North America number
UN/NA#	Code of Federal Regulations
CFR	Workplace Hazardous Material Information System
WHMIS	

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX L



MATERIAL SAFETY DATA SHEET

MSDS # 61-362-001

SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control

Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 13, 2006
Version: 2

SECTION 1

CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control
CHEMICAL FAMILY: An aqueous mixture of minerals and vinyl acetate polymer

SECTION 2

COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Water	>35	(NE)	(NE)	7732-18-5
Limestone	>35	10	15 (T) / 5 (R)	1317-65-3
Expanded Perlite	<15	10	15 (T) / 5 (R)	93763-70-3
Blend of Proprietary Ingredients	<10	10	15 (T) / 5 (R)	Proprietary
Crystalline Silica	<5	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

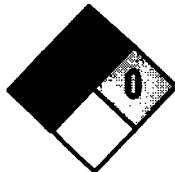
SECTION 3

HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

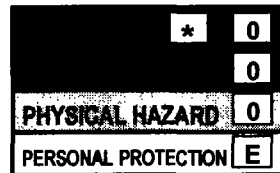
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS # 61-362-001

Page 2 of 8

SECTION 3 HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS # 61-362-001

Page 3 of 8

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7 HANDLING AND STORAGE

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS # 61-362-001

Page 4 of 8

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H₂O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10

CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

MSDS # 61-362-001

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

Page 5 of 8

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

SECTION 12

ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13

DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS # 61-362-001

Page 6 of 8

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Water	>35	NL	NL	NL	NL	NL	NL
Limestone	>35	NL	NL	NL	NL	NL	NL
Expanded Perlite	<15	NL	NL	NL	NL	NL	NL
Blend of Proprietary Ingredients	<10	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS # 61-362-001

Page 7 of 8

SECTION 16 REGULATORY INFORMATION (continued)

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Water	>35	Not Listed	Not Listed
Limestone	>35	Not Listed	D2A
Expanded Perlite	<15	Not Listed	D2A
Blend of Proprietary Ingredients	<10	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	1	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS # 61-362-001

Page 8 of 8

SECTION 16

OTHER INFORMATION

Label Information

⚠WARNING!

Dust generated from sanding product may cause irritation to eyes, skin, nose, throat and upper respiratory tract. Avoid irritation by reducing exposure to dust. Use in a well-ventilated area or provide sufficient local ventilation. If dusty, wear a NIOSH/MSHA-approved respirator. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX M



06106
Page 1/5

MATERIAL SAFETY DATA SHEET

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60606-4678

Date Issued: September 23, 1996
Product Safety: (800) 507-8899

SECTION I

**PRODUCT: SHEETROCK® Two-Purpose Joint Compound - TOTAL
Ready Mixed**

CHEMICAL FAMILY: Aqueous mixture of limestone and vinyl acetate polymer

SECTION II INGREDIENTS

MATERIAL	Wt%	TLV mg/m ³	PEL mg/m ³	CAS NUMBER
limestone	> 50	10	15(T)/5(R)	1317-65-3
water	< 40	(NE)	(NE)	7732-18-5
mica	< 5	3(R)	3(R)	12001-26-2
expanded perlite	< 5	10	15(T)/5(R)	93763-70-3
attapulgit	< 5	(NE)	(NE)	12174-11-7
vinyl acetate polymer	< 5	(NE)	(NE)	9003-20-7
vinyl acetate monomer	trace	10ppm	10ppm	108-05-4
acetaldehyde	trace	100ppm	100ppm	75-07-0
silica-crystalline, respirable	trace	0.1(R)	0.1(R)	14808-60-7

(T) - Total (R) - Respirable (NE) - Not Established

All components are included on the TSCA inventory.

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR: Off white paste; low odor.
BOILING POINT: 212°F
MELTING/FREEZING POINT: 32°F
SPECIFIC GRAVITY (H₂O = 1): 1.6
HARDENING TIME: Varies. Check usage and/or product specification data for product.
pH range: 7-8.5
VAPOR PRESSURE: 17 @ 20°C
Volatile Organic Compounds: < 5 g/L



SHEETROCK® Two-Purpose Joint Compound - TOTAL

Page 2/5

**SECTION IV
FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): Noncombustible
SPECIAL FIRE FIGHTING PROCEDURES: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT: None
EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

**SECTION V
HEALTH HAZARD DATA**

Dust generated from this product would be considered a nuisance dust. This product can release nuisance dust if sanding. Eye, skin, nose, throat, and upper respiratory irritation may occur with prolonged dust exposure.

EFFECTS OF OVEREXPOSURE:

ACUTE:

EYES: Direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

SKIN: Direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, then wash skin thoroughly with mild soap and water. If irritation persists, consult physician. May dry skin.

INHALATION: Inhalation of dust from this product may irritate the nose, throat, lungs, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation from dust. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

INGESTION: No known effects.

CHRONIC:

EYES: None known.

SKIN: None known.

INHALATION: This product may contain small amounts of vinyl acetate monomer, vapors of which have been shown to cause tumors in the respiratory tract of laboratory animals. Chronic overexposure to vinyl acetate is not expected to occur during normal handling and use of this product. Vinyl acetate has been shown to cause irritation and cancer in inhalation studies with laboratory animals. Test levels of 600ppm over a lifetime caused an increase in tumors in the respiratory tract of the test animals. 200ppm caused irritation. No tumors were observed in the animals exposed at 50ppm or lower. There is no evidence of adverse effects to humans exposed to levels at or below the TLV.

Chronic overexposure to respirable crystalline silica may result in lung disease (i.e., silicosis) and/or lung cancer. Prolonged and repeated breathing of respirable mica may cause lung disease.

INGESTION: No known effects.



SHEETROCK® Two-Purpose Joint Compound - TOTAL

Page 3/5

**SECTION V
HEALTH HAZARD DATA
(Continued)**

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush thoroughly with plenty of water for 15 minutes to remove particles. If irritation persists, consult physician.

SKIN: Rinse with water, then wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

INHALATION: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

INGESTION: No harmful effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, and respiratory system.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTE OF ENTRY: Inhalation; Eye and/or Skin contact.

CARCINOGENICITY OF INGREDIENTS:

MATERIAL	IARC	NTP
respirable crystalline silica	2A	Anticipated
acetaldehyde	2B	Anticipated
vinyl acetate monomer	2B	Not Listed

The quantity of respirable crystalline silica has not been determined in this product. Respirable crystalline silica is classified by IARC as a (2A) probable human carcinogen. Long-term breathing of large amounts of silica may cause lung disease (i.e., silicosis) and/or possibly lung cancer.

USG has measured exposure levels to respirable crystalline silica in actual joint compound product applications at job sites. Results of this industrial hygiene testing for USG joint compounds showed no detection of respirable crystalline silica following NIOSH Method 7500.

Vinyl acetate monomer and acetaldehyde, if present, are trace components of the vinyl acetate polymer. Quantities of monomer have not been measured but would be expected to be less than 0.1 Wt. %.



SHEETROCK® Two-Purpose Joint Compound - TOTAL

Page 4/5

**SECTION VI
REACTIVITY DATA**

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur.
INCOMPATIBILITY: None known.
HAZARDOUS DECOMPOSITION: CO₂ would be produced at high temperatures with the decomposition of limestone (~800°C). Stable under normal temperature and pressure. Product contains low level of organic volatiles which may be emitted or released in application processes involving the use of heat. Vent all ovens and process vessels to the outside atmosphere. Thermal decomposition will produce H₂O, CO₂, CO, and acetic acid. Could produce vinyl acetate monomers when temperature is above 175°C.

**SECTION VII
SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use normal clean up procedure. Spilled material can produce slippery conditions, be cautious to avoid falling. Wear appropriate protective equipment. Shovel material from spillage into a waste container for disposal.

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations.

**SECTION VIII
SPECIAL PROTECTION INFORMATION**

No TLV assigned to this mixture, see Ingredients Section. Minimize dust exposures in accordance with good hygiene practice.

RESPIRATORY PROTECTION: Not typically necessary under normal conditions of use. Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients and to control dusting conditions. Wear a NIOSH/MSHA-approved respirator when dusty conditions exist, in poorly ventilated areas, and if TLV is exceeded.

VENTILATION: Ventilate to keep exposures below TLV. General ventilation is expected to be satisfactory. Use local exhaust ventilation if necessary to control dust.

PROTECTIVE EQUIPMENT: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye. Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. Wear adequate clothing to minimize chafing or drying of skin.



**SECTION IX
SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Normal precautions should be followed in handling, storage, and use. During handling and use wear the appropriate respiratory, eye and skin protection if warranted per environmental conditions.

Use wet sanding technique to reduce dust exposure when finishing joints. See "Finishing and Decorating Gypsum Panels - Wet Sanding, J-610/12-87".

Recommended Storage Methods: Keep from freezing. Store at temperatures less than 120°F. Monomer vapors can be evolved when material is heated.

OTHER PRECAUTIONS:

Δ WARNING

Dust generated from sanding product may cause eye, skin, nose, throat or respiratory irritation. Use wet-sanding to avoid creating dust. Avoid inhalation of dust and eye contact. If dusty, wear a NIOSH/MSHA-approved respirator. Prolonged and repeated exposure to respirable mica may cause lung disease. Wear eye protection. Provide good general ventilation and local exhaust ventilation to avoid excessive amounts of dust. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not ingest. If ingested, call physician. Product safety information: (800) 507-8899.
KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS:

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0 Other: N/A

HMIS Ratings: Health: 0 Fire: 0 Reactivity: 0

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

- 0 Minimal Hazard
- 1 Slight Hazard
- 2 Moderate Hazard
- 3 Serious Hazard
- 4 Severe Hazard



APPENDIX N



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed

Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899

www.usg.com

Version Date: October 8, 2003

Version: 4

SECTION 1

CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed**CHEMICAL FAMILY:** An aqueous mixture of minerals and vinyl acetate polymer

SECTION 2

COMPOSITION INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	<50	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Water	>30	(NE)	(NE)	7732-18-5
Expanded Perlite	<10	10	15 (T) / 5 (R)	93763-70-3
Vinyl Acetate Polymer	<10	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Attapulgite	<5	(NE)	(NE)	12174-11-7
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

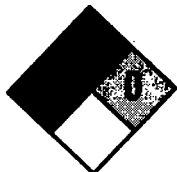
SECTION 3

HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

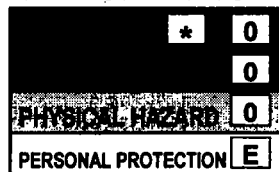
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Page 2 of 8
Topping Lite Ready Mixed

SECTION 3 - HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4

FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound
Topping Lite Ready Mixed

Page 3 of 8

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7 HANDLING AND STORAGE

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight Topping Joint Compound
Topping Lite Ready Mixed

MSDS # 61-360-009

Page 4 of 8

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10

CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound
Topping Lite Ready Mixed

Page 5 of 8

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight Topping Joint Compound
Topping Lite Ready Mixed

MSDS # 61-360-009

Page 6 of 8

SECTION 14

TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

SECTION 15

REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	<50	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Water	>30	NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<10	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Attapulgate	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound
Topping Lite Ready Mixed

Page 7 of 8

SECTION 15 REGULATORY INFORMATION (continued)

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	<50	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Water	>30	Not Listed	Not Listed
Expanded Perlite	<10	Not Listed	D2A
Vinyl Acetate Polymer	<10	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Attapulgite	<5	Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed

Page 8 of 8

OTHER INFORMATION

Label Information

⚠WARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX O

USG MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 4

SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Taping Joint Compound
CHEMICAL FAMILY: A mixture of limestone, an emulsion polymer and other minerals

SECTION 2 COMPOSITION INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>65	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Mica	<15	3 (R)	20 mppcf	12001-26-2
Attapulgate	<10	(NE)	(NE)	12174-11-7
Vinyl Alcohol Polymer	<5	(NE)	(NE)	9002-89-5
Hydroxypropyl Amylopectin Phosphate	<5	(NE)	(NE)	113894-92-1
Crystalline Silica	<5	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mppcf - million particles per cubic foot of air

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

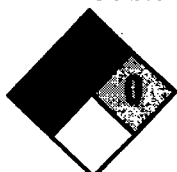
All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

SECTION 3 HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

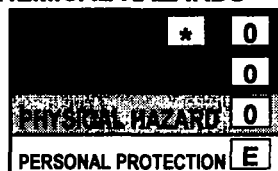
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.

SECTION 2: HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Dust exposures generated during the handling of the product may irritate eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4
FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 3 of 8

SECTION 6

FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6

ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. If dry, shovel or sweep up material from spillage and place collected material into a container for recovery or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposures. If washed down, may plug drains.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7

HANDLING AND STORAGE

HANDLING:

Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Keep containers closed when not in use



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 4 of 8

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off white	Viscosity	Not Applicable
Physical State	Solid (powder)	Solubility (H ₂ O)	~ 0.15 g/100 g solution
Odor	Low to no odor	Boiling Point	Not Available
pH @ 25 °C	~7.5-9	Melting Point	825-1339 °C
Particle Size	Varies	Softening Point	Not Available
Molecular Weight	Mixture	Freezing Point	Not Available
Bulk Density	~ 40-80 lb/ft ³	Vapor Density (Air = 1)	Not Applicable
Specific Gravity (H ₂ O = 1)	~ 2.3-2.6	Vapor Pressure (mm Hg)	Not Applicable
Percent Volatile	Zero	Evaporation Rate (BuAc = 1)	Not Applicable
VOC Content	Zero		

SECTION 10

CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 5 of 8

SECTION 4 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product. LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003

Page 6 of 8

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>65	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Mica	<15	NL	NL	NL	NL	NL	NL
Attapulgit	<10	NL	NL	NL	NL	NL	NL
Vinyl Alcohol Polymer	<5	NL	NL	NL	NL	NL	NL
Hydroxypropyl Amylopectin Phosphate	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities (TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>65	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Mica	<15	1088	Not Listed
Attapulgit	<10	Not Listed	Not Listed
Vinyl Alcohol Polymer	<5	Not Listed	Not Listed
Hydroxypropyl Amylopectin Phosphate	<5	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 7 of 8

SECTION 16 REGULATORY INFORMATION (continued)

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

- 1- Carcinogenic to humans
- 2A – Probably carcinogenic to humans
- 2B – Possibly carcinogenic to humans
- 3 - Not classifiable as a carcinogen
- 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

- 1- Known to be carcinogen
- 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

- A1 – Confirmed human carcinogen
- A2 – Suspected human carcinogen
- A3 – Animal carcinogen
- A4 - Not classifiable as a carcinogen
- A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"

SECTION 15 OTHER INFORMATION

Label Information

⚠WARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 8 of 8

SECTION 10 OTHER INFORMATION (continued)

ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:
Product Safety
USG Corporation
125 South Franklin St.
Chicago, Illinois 60606

END

APPENDIX P



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899

www.usg.com

Version Date: October 8, 2003

Version: 5

SECTION 1

CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed**CHEMICAL FAMILY:** An aqueous mixture of minerals and vinyl acetate polymer

SECTION 2

COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>45	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Water	<45	(NE)	(NE)	7732-18-5
Expanded Perlite	<5	10	15 (T) / 5 (R)	93763-70-3
Mica	<5	3 (R)	20 mppcf	12001-26-2
Attapulgite	<5	(NE)	(NE)	12174-11-7
Vinyl Acetate Polymer	<5	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mppcf - million particles per cubic foot of air

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

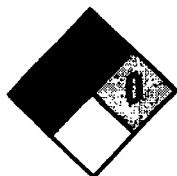
SECTION 3

HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

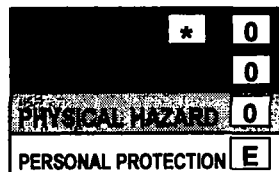
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator
Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis).

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 2 of 8

SECTION 3: HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4

FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 3 of 8

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7 HANDLING AND STORAGE

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 4 of 8

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10

CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 5 of 8

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 6 of 8

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>45	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Water	<45	NL	NL	NL	NL	NL	NL
Expanded Perlite	<5	NL	NL	NL	NL	NL	NL
Mica	<5	NL	NL	NL	NL	NL	NL
Attapulgit	<5	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<5	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 7 of 8

SECTION 15 REGULATORY INFORMATION (continued)

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>45	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Water	<45	Not Listed	Not Listed
Expanded Perlite	<5	Not Listed	D2A
Mica	<5	1088	Not Listed
Attapulgit	<5	Not Listed	Not Listed
Vinyl Acetate Polymer	<5	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

- 1- Carcinogenic to humans
- 2A – Probably carcinogenic to humans
- 2B – Possibly carcinogenic to humans
- 3 - Not classifiable as a carcinogen
- 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

- 1- Known to be carcinogen
- 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

- A1 – Confirmed human carcinogen
- A2 – Suspected human carcinogen
- A3 – Animal carcinogen
- A4 - Not classifiable as a carcinogen
- A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 8 of 8

OTHER INFORMATION

Label Information

ΔWARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX Q

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: July 6, 2004
Version: 2

SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Total Lite
CHEMICAL FAMILY: An aqueous mixture of minerals and vinyl acetate polymer

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Water	>40	(NE)	(NE)	7732-18-5
Limestone	>35	10	15 (T) / 5 (R)	1317-65-3
Expanded Perlite	<10	10	15 (T) / 5 (R)	93763-70-3
Vinyl Acetate Polymer	<10	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Attapulgite	<5	(NE)	(NE)	12174-11-7
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

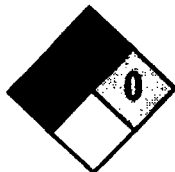
All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

SECTION 3 HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0

	*	0
		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		E

0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



SECTION 3 HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4
FIRST AID MEASURES

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



SECTION 5
FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

SECTION 6
ACCIDENTAL RELEASE MEASURES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7
HANDLING AND STORAGE

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.

SECTION 8
EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H₂O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10
CHEMICAL STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.

SECTION 11
TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

SECTION 12
ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

SECTION 14
TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

SECTION 15
REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Water	>40	NL	NL	NL	NL	NL	NL
Limestone	>35	NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<10	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] -- Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

SECTION 15 REGULATORY INFORMATION (continued)

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Water	>40	Not Listed	Not Listed
Limestone	>35	Not Listed	D2A
Expanded Perlite	<10	Not Listed	D2A
Vinyl Acetate Polymer	<10	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Attapulgate	<5	Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	1	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"

SECTION 16
OTHER INFORMATION

Label Information

ΔWARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX R

Annual Refresher Training: minesite/offsite
Hazard Training: minesite/offsite

5. Number of miners and trainees

Approximate number of miners employed:	11
Maximum number of trainees per training session:	11

TRAINING PROGRAM FOR NEW MINERS (SURFACE)

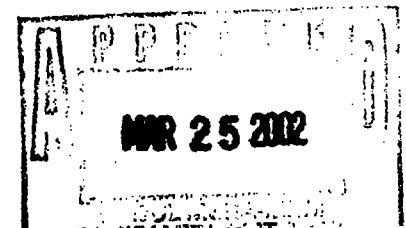
Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Instruction in statutory rights of miners and their representatives under the Act; authority and responsibility of supervisors.	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	Mine Safety and Health Act	Oral
Transportation controls and communications systems.	1 hour	Conference Room and Quarry	Approved Instructor	Demonstration Lecture Discussion	MSHA Standards, Company Policy	Oral
Introduction to the work environment.	2 hour	Plant and Quarry	Approved Instructor	Walk Around Lecture Discussion	Quarry and Plant	Oral
Escape and emergency evacuation plans; fire warning and fire fighting.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, Company Policy	Oral
Ground control and working around highwalls; water hazards; night work.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, MSHA Guides	Oral

MAR 25 2002

TRAINING PROGRAM FOR NEW MINERS (SURFACE)

Self Rescue and respiratory devices.	1 hour	Conference Room	Approved Instructor	Lecture Discussion	Respirator	Oral
Health	1 hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, MSHA Guides	Oral
Hazard Recognition	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Electrical Hazards	1 hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
First-Aid	8 hour	Conference Room	Approved Instructor	Lecture Discussion	Red Cross	Oral
Explosives	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Blaster, Company Policy	Oral
Health and Safety aspects of the task to which the new miner will be assigned.	5 hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral

24 Hours
Total



TRAINING PROGRAM FOR NEWLY HIRED EXPERIENCED MINERS (SURFACE)

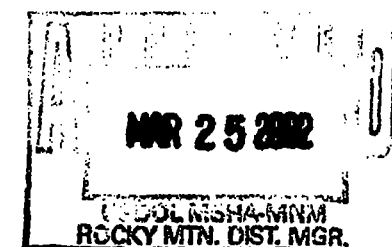
Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Introduction to the work environment.	1 hour	Plant and Quarry	Approved Instructor	Walk Around Lecture Discussion	Quarry and Plant	Oral
Instruction in statutory rights of miners and their representatives under the Act; authority and responsibility of supervisors.	1/2 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	Mine Safety and Health Act	Oral
Transportation controls and communications systems.	1/2 hour	Conference Room and Quarry	Approved Instructor	Demonstration Lecture Discussion	MSHA Standards, Company Policy	Oral
Escape and emergency evacuation plans; fire warning and fire fighting.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, Company Policy	Oral
Ground control and working around highwalls; water hazards; night work.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, MSHA Guides	Oral

MR 25 2002

TRAINING PROGRAM FOR NEWLY HIRED EXPERIENCED MINERS (SURFACE)

Hazard Recognition	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Mandatory Health and safety standards.	1 hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards	Oral
Prevention of Accidents	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Emergency Medical Procedures	1 hour	Conference Room	Approved Instructor	Lecture Discussion	Red Cross	Oral
Health	1 hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, MSHA Guides	Oral
Health and Safety aspects of the task to which the new miner will be assigned.	1 hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral

10 hours total



TRAINING PROGRAM - EXPERIENCED MINER NEW TASK TRAINING (SURFACE)

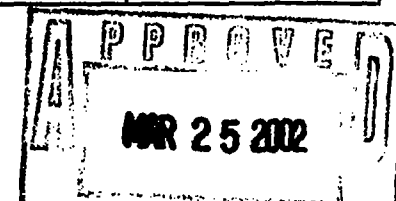
WORK ASSIGNMENT	TOTAL HOURS	LOCATION	CONDUCTED BY <i>EXPERIENCED PERSON IN THE ASSIGNED TASK.</i>	TRAINING PROCEDURES	EQUIPMENT/MATERIALS	EVALUATION
<u>CRUSHER OPERATOR</u> 1. Loader Operator a) Safety Check b) Operation 2. Rock Breaker 3. General Crusher Operations. 4. House Keeping in and around Crusher System.	20-30 hours	Plant (Crusher)	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Front End Loader, Rock Breaker	Questions, Demonstration, Observations
<u>HAUL TRUCK OPERATOR</u> 1. Equipment Inspection 2. Operations 3. Pit Loading Procedures 4. Road Traffic 5. Communications	2-6 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Haul Truck	Questions, Demonstration, Observations
<u>DOZER OPERATOR</u> 1. Equipment Inspection 2. Operations 3. Techniques for stripping, ripping, road building, and reclamation. 4. Minor Repairs	20-30 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Dozer	Questions, Demonstration, Observations

*As per phone call Bruce Lash and Steve Miller
2-15-2002*

MAR 25 2002

TRAINING PROGRAM - EXPERIENCED MINER NEW TASK TRAINING (SURFACE)

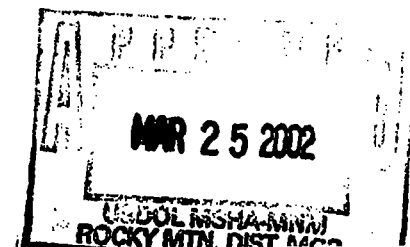
<u>DRILL OPERATOR</u> 1. Equipment Inspection 2. Operation 3. Layout of drill pattern 4. Minor repairs to drill	30-40 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Drill	Questions, Demonstration, Observations
<u>GRADER OPERATOR</u> 1. Equipment Inspection 2. Operation 3. Techniques of contouring and road blading. 4. Road Traffic	10-20 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Grader	Questions, Demonstration, Observations
<u>BLASTER</u> 1. Explosives Safety 2. Pattern layout 3. Inspection of blast site 4. Record keeping 5. Handling and Transportation	30-40 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards	Questions, Demonstration, Observations
<u>BACKHOE/ ROCK BREAKER OPERATOR</u> 1. Equipment Inspection 2. Operation 3. Minor Repairs 4. Road Traffic 5. Communications	2-6 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Backhoe/Rock Breaker	Questions, Demonstration, Observations



TRAINING PROGRAM - EXPERIENCED MINER NEW TASK TRAINING (SURFACE)

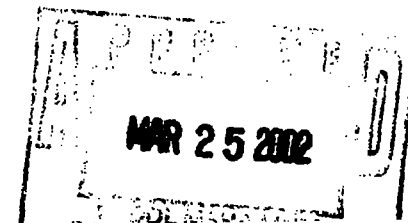
WATER TRUCK						
1. Equipment Inspection	6-10 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Water Truck	Questions, Demonstration, Observations
2. Operation						
3. Loading Procedures						
4. Road Traffic						
5. Communications						

* Health and safety aspects of the operating procedures for water trucks, equipment and/or machinery. Supervised practice during non-production. Supervised operation during production. Take operating procedures for new and modified machine and equipment.
 * As per phone call Bruce Canon - Stone Millar.
 2-15-2002.



TRAINING PROGRAM - HAZARD TRAINING (SURFACE)

Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Hazard recognition and avoidance.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral
Emergency and evacuation procedures.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral
Health and safety standards; safety rules and safe working procedures.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral
Self-rescue and respiratory devices.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral



ANNUAL REFRESHER TRAINING (SURFACE)

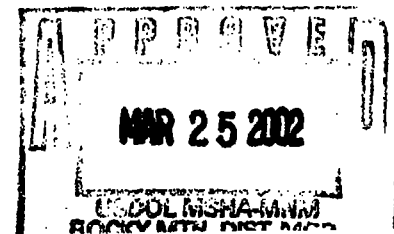
Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Mandatory Health and safety standards.	1/2 Hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards	Oral
Transportation/Ground controls and communications systems.	1 Hour	Conference Room and Quarry	Approved Instructor	Demonstration Lecture Discussion	MSHA Standards, Company Policy	Oral
Escape and emergency evacuation plans; fire warning and fire fighting.	1/2 Hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, Company Policy	Oral
First-Aid	3 1/2 hours	Conference Room	Approved Instructor	Lecture Discussion	Red Cross	Oral
Electrical Hazards	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Health	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, MSHA Guides	Oral
Explosives	1/2 Hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Blaster, Company Policy	Oral

MAR 25 2002

ANNUAL REFRESHER TRAINING (SURFACE)

Self Rescue and respiratory devices.	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	Respirator	Oral
Prevention of Accidents	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	Respirator	Oral

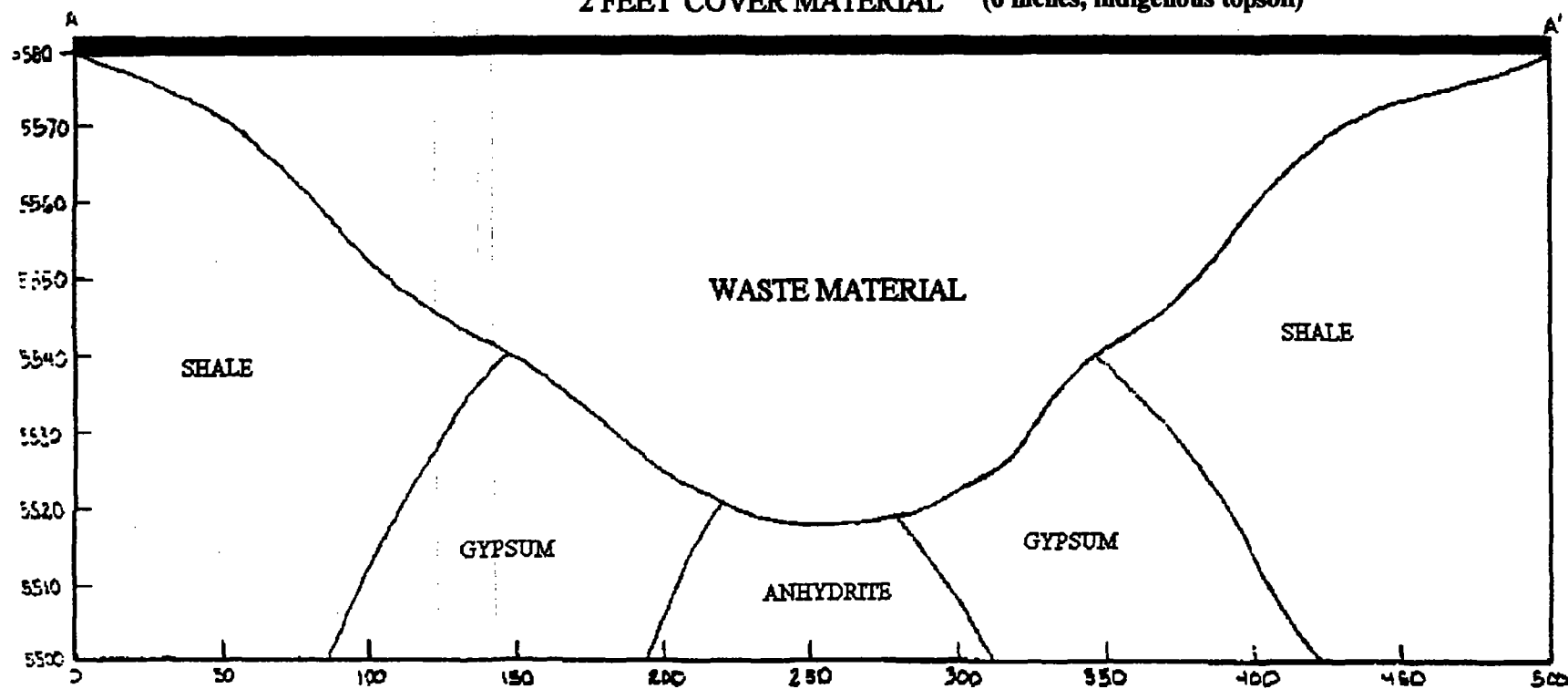
8 Hours Total



APPENDIX S

FINAL COVER

2 FEET COVER MATERIAL (6 inches, indigenous topsoil)



APPENDIX T

Estimated Closure Cost of Sigurd Phase 1 Landfill

We are required to have 1.5' of cap over the Landfill at closure.

The top 6" should be top soil, which is comparative to the surrounding top soil.

Rule Location		
R315-309-2(2)	Financial Assurance to updated every 5 years	
R315-309-2(3)(a)(i)&(ii)	Type of Cap	Shale
	# of Acre's in Landfill	9.4
	depth of cap (ft.)	1.5
	cubic ft. in cap	614198
	lbs./cuft	120
	# of tons in cap	36852
	Price \$/ton	\$2.00
	Total Material Cost	\$73,704
	# of operators	5
	# of Labor hours	2792
	\$ per hour	30
	Total Labor Cost	\$83,754
	(i)The cost of obtaining, moving, and placing the cover material.	
	(ii)The cost of final grading of the cover material.	\$157,458
R315-309-2(3)(a)(iii)&(iv)	Type of Cap	Top Soil
	# of Acre's in Landfill	9.4
	depth of cap (ft.)	0.5
	cubic ft. in cap	204733
	lbs./cuft	120
	# of tons in cap	12284
	Price \$/ton	\$7.00
	Total Material Cost	\$85,988
	# of operators	5
	# of Labor hours	931
	\$ per hour	30
	Total Labor Cost	\$27,918
	Cost of Seed \$/lb	20.25
	lbs./acre	20
	Total seed cost	\$3,807
	(iii)The cost of moving, and placing topsoil on the final cover and	
	(iv)The cost of fertilizing, seeding, and mulching or other approved method.	\$117,713
R315-309-2(3)(b)	The post closure care cost estimate.	

Using scenario of plant being shut down:

Annual inspections - including travel, hotel, wages	\$1,500
(1) 30 years of inspections (\$1500 x 30) =	\$45,000
\$300/hr equipment & labor (5 days @ 10 hrs)	\$15,000
Cost of replacement of Topsoil and berms	\$10,000
Total cost for repair work	\$25,000
Contract work to repair cap and berms: once/q0 yr.	3
(2) Total repair costs =	\$75,000
Total post closure care cost estimate (1)+(2).	\$120,000
(i)ground water monitoring. R315-304-5(4)(c) A Class IIb landfill is exempt from ground water monitoring requirements of rule R315-308	
(ii)leachate monitoring and (iii)gas monitoring and control are not required	
(iv)cover stabilization	

APPENDIX U

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF SOLID AND HAZARDOUS WASTE

APPLICATION FOR A PERMIT TO OPERATE A CLASS III LANDFILL

The applicant shall submit, in duplicate, an original permit application, a general report, and a technical report to:

Dennis R. Downs, Director
Division of Solid and Hazardous Waste
Department of Environmental Quality
P.O. Box 144880
Salt Lake City, Utah 84114-4880

PART I – GENERAL INFORMATION

1. Name of Facility: Jumbo
2. Site Location: Sevier County, Township 22 South, Range 1 West, Section 29
3. Facility Owner: United States Gypsum Company
4. Facility Operator: United States Gypsum Company
5. Contact Persons: Clay Shumway Joshua Reese
 Quarry Manager Project Engineer
 Address: P.O. Box 570160
 Sigurd, UT 84657

 Telephone: (435)896-2431 (435) 896-2423
6. Type of Application:

☐ Class IIIa Landfill

☒ Class IIIb Landfill

☐ Initial Application

☒ Permit Renewal
7. Property Ownership:

☒ Presently owned by applicant

☐ To be purchased by applicant

☐ To be leased by applicant

Property owner (if different from applicant)

Name United States Gypsum Company
Address 550 West Adams Street
Chicago, IL 60661-3676
Telephone (312) 436-4000

8. Certification of submitted information.

Bruce Allen, Plant Manager
(Name of Official) (Title)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

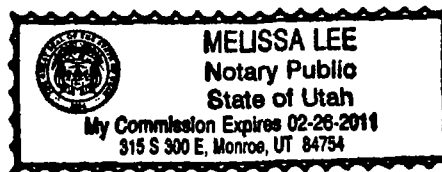
Signature: [Signature] Date: 9/26/07

SUBSCRIBED AND SWORN to before This 26th day of Sept, 2007

My commission expires on the 26th day of February, 2011

[Signature]
Notary Public in and for

(SEAL) Sewer County, Utah.



Important Note: An application for a permit to construct and operate a landfill is the documentation that the landfill will be located, designed, constructed, and operated to meet the requirements of Rules R315-302, R315-304, R315-308, and R315-309 of the Utah Solid Waste Permitting and Management Rules and the *Utah Solid and Hazardous Waste Act (UCA 19-6)*. The application should also be written so that the landfill operator, after reading it, will be able to operate the landfill according to the requirements with a minimum of additional training. Two copies of the complete application are required.

CHECKLIST OF ADDITIONAL INFORMATION REQUIRED

(Please see Section R315-310-5 of the *Utah Solid Waste Permitting and Management Rules*)

PART II – GENERAL REPORT

A-INTRODUCTION

A-1 Completed PART I- GENERAL INFORMATION (R315-310-3(1)(a)):

United States Gypsum Company
(Applicant, Property Owner, and Responsible Party)
Address: 81 North State Street
P.O. Box 570160
Sigurd, UT 84657

A-2 General description of the facility (R315-310-3(1)(a)):

A-3 Legal description; proof of ownership, lease agreement, or other mechanism; latitude and longitude of the site; and land use and zoning of surrounding area (R315-310-3(1)(c)):

A-2&3-1: United States Gypsum Company, a Chicago based company wishes to submit an application for modification of the Jumbo Class IIIb solid waste landfill, permit #9418. The landfill is located on patented mining claims in Sevier County, Township 22 South, Range 1 West, Section 29. (Lat. 111°55'28" Long. 38°51'25") (See **proof of ownership in Appendix C**). The Jumbo landfill is incorporated into the company's ongoing Approved Reclamation Plan. A variance was submitted on August 20, 1993 to obtain approval from the State of Utah, Department of Natural Resources, Division of Oil, Gas, and Mining. The Department granted the variance based on the approval of permit #9418 (see **enclosed letter, Appendix A**). The Jumbo solid waste landfill is a 27.77 acre area, approximately 60 feet in depth, located in the mined out N-1 Pit, Jumbo patented claim (see **exhibits for location, Appendix B, C, D, E**). The Jumbo solid waste landfill is located away from any major drainage features and the topography is typical of rolling hills. The Jumbo solid waste landfill is located five (5) miles from the nearest residential home, four (4) miles from any industrial building, and four (4) miles from the nearest well. This well is used for process water for the manufacturing of gypsum

wallboard. Access to the Jumbo solid waste landfill is by the existing major haul road from the wallboard plant to the active mining area on the patented Jensen Claim.

A-4 The types of waste and area served by the facility (R315-310-3(1)(d)):

A-4-1: The Jumbo solid waste landfill is a single user site only. Materials placed in the site include: gypsum waste produced by the United States Gypsum wallboard plant in Sigurd and some remnant ready-mix product, paper, and cardboard. The gypsum waste, deemed a non-hazardous waste, is hauled to the Jumbo solid waste landfill with quarry haul trucks. All other plant waste (including household waste) is separated and disposed of through White's Sanitation. Any hazardous waste is disposed of properly through a contractor. With the waste already segregated, the operators only do a general inspection and do not need to be trained to recognize PCB or any other hazardous waste. The loads are trimmed to minimize any littering along the quarry haul road. Daily waste tonnages are recorded and filed in the Quarry Office (See **Appendix F**).

A-5 A demonstration that the landfill is not a commercial landfill:

A-5-1: Fencing is installed around the entire Phase 1 dump area with a lockable entrance gate to prevent illegal dumping and control animals. The gate is opened and watched during business hours and secured and locked when the quarry is not in operation (See Picture 1 below). Fencing will be placed around the boundaries of Phases 2, 3, and 4 before any material is placed at the site.



Picture 1: Entrance to the landfill is closed and locked when not in use and it is posted as a "Private Landfill Only." Photo taken 8/24/07

B- PLAN OF OPERATION 9R315-310-3(1)(e))

B-1 An intended schedule of construction (R315-302-2(2)(a)):

B-2 A description of on-site waste handling procedures and an example of the form used to record the weights or volumes of waste received (R315-302-2(2)(b) and R315-310-3(1)(f)):

B-3 A schedule for conducting inspections and monitoring and examples of the forms used to record the results of the inspections and monitoring (R315-302-2(2)(c) and R315-310-3(1)(g)):

B- 1&2&3-1: U.S. Gypsum's, Sigurd Plant Phase 1 landfill has a total site capacity of 315,247 cubic yards or 63,049 tons. Current fill to date is 190,765 cubic yards, or 38,153 tons. Remaining capacity is 124,482 cubic yards, or 24,896 tons. The Phase 2 landfill has an estimated capacity of 42,302 tons, or 211,511 cubic yards based on Phase 1's acreage-volume percentage. The Phase 3 landfill has an estimated capacity of 35,162 tons, or 175,811 cubic yards. The Phase 4 landfill has an estimated capacity of 46,546 tons, or 232,730 cubic yards.

Handling Procedures: The gypsum waste, deemed a non-hazardous waste by the Department of Environmental Quality, is hauled to the Jumbo solid waste landfill in the following manner: The waste material is deposited in a waste bunker at the front of the plant. A front-end loader operator will inspect the bunker to make sure everything is the proper material and then load the material into a haul truck. The loads are then trimmed to minimize any littering along the quarry haul road. The quarry haul trucks haul from the plant to the landfill site. The haul trucks then enter the dumpsite and empty their load working their way from the perimeter to the entrance. The operator logs the amount hauled to the dump. Once a layer is full, a bulldozer will work the whole site over to break everything up and smooth it over. This prepares the dump for the next layer and should eliminate any major voids in the dump. A thin layer of shale is placed over the dump at this same time.

Daily waste tonnages are recorded and filed in the Quarry Office (See Appendix F).

Daily inspections of the landfill are conducted by authorized personnel and documented (See Appendix G). Due to on-going mining operations in the near vicinity, the following equipment will be available for excavation, compaction, spreading, and other related activities:

- Two (2) Front-end loaders
- Two (2) Haul trucks (40 & 35 ton)
- Two (2) Bulldozers with rippers
- Road Grader
- Backhoe

No zoning exists at the site. The general surrounding area is controlled by the Bureau of Land Management as a multiple use area.

Approximately 12 tons of total waste, per week is dumped at the site.

Gypsum Panel Products containing the following ingredients (see enclosed MSDS, Appendix H):

Gypsum	>85.00%
Cellulose	<10.00%

Starch	<3.00%
Silica-Crystalline, Respirable	<0.10%
MAY CONTAIN THE FOLLOWING	
Fibrous Glass (Textile Grade)	<1.00%
Ethylene Vinyl Acetate Polymer	<2.00%

Topping Joint Compound Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix I):

Limestone or Dolomite or Gypsum	>50.00%
Water	<35.00%
Mica, Respirable	<5.00%
Ethylene-Vinyl Acetate Polymer	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Acetaldehyde	<0.10%
Crystalline Silica	<2.00%
MAY CONTAIN THE FOLLOWING	
Talc	<5.00%

Topping Joint III Compound Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix J):

Limestone	>50.00%
Water	<35.00%
Expanded Perlite	<5.00%
Mica, Respirable	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Acetaldehyde	<0.10%
Silica- Crystalline, Respirable	trace

Lightweight All Purpose Joint Compound Plus 3 Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix K):

Limestone or Dolomite or Gypsum	>35.00%
Water	>40.00%
Expanded Perlite	<10.00%
Vinyl Acetate Polymer	<10.00%
Attapulgite	<5.00%
Crystalline Silica, Respirable	<2.00%

Lightweight All Purpose Joint Compound Plus 3 with Dust Control Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix L):

Limestone	>35.00%
Water	>35.00%
Expanded Perlite	<15.00%

Blend of Proprietary Ingredients	<10.00
Crystalline Silica, Respirable	<5.00%

Two-Purpose Joint Compound – Total Ready Mix waste consists of the following ingredients (see enclosed MSDS, Appendix M):

Limestone	>50.00%
Water	<40.00%
Mica, Respirable	<5.00%
Expanded Perlite	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Vinyl Acetate Monomer	Trace
Acetaldehyde	Trace
Crystalline Silica, Respirable	Trace

Lightweight Topping Joint Compound Topping Lite Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix N):

Limestone or Dolomite	<50.00%
Water	>30.00%
Expanded Perlite	<10.00%
Vinyl Acetate Polymer	<10.00%
Attapulgite	<5.00%
Silica- Crystalline, Respirable	<2.00%

Taping Joint Compound Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix O):

Limestone or Dolomite	>65.00%
Mica, Respirable	<15.00%
Attapulgite	<10.00%
Vinyl Alcohol Polymer	<5.00%
Hydroxypropyl Amylopectin Phosphate	<5.00%
Silica- Crystalline, Respirable	<5.00%

All Purpose Joint Compound Mid-Weight Ready-Mix waste consists of the following ingredients (see enclosed MSDS, Appendix P):

Limestone or Dolomite	>45.00%
Water	<45.00%
Expanded Perlite	<5.00%
Mica, Respirable	<5.00%
Attapulgite	<5.00%
Vinyl Acetate Polymer	<5.00%
Crystalline Silica, Respirable	<2.00%

Total Lite Joint Compound Ready Mix waste consists of the following ingredients (see enclosed MSDS, Appendix Q):

Water	>40.00%
Limestone	>35.00%
Expanded Perlite	<10.00%
Vinyl Acetate Polymer	<10.00%
Attapulgite	<5.00%
Crystalline Silica, Respirable	<2.00%

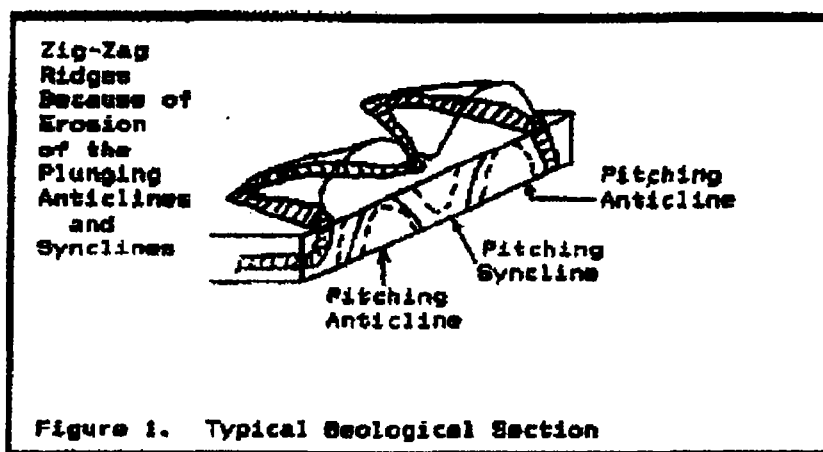
There is no food waste or hazardous material dumped at this site.

B-4 Contingency plans in the event of a fire or explosion (R315-302-2(2)(d)):

B-4-1: Due to the Fire Resistant Nature of Wallboard, there is no chance for any of the waste material to self combust or to even catch fire with a significant ignition source. Therefore, no contingency plans for fire or explosion are needed.

B-5 Corrective action programs to be initiated if ground water is contaminated (R315-302-2(2)(e)):

B-5-1: A vertical anhydrite zone crosses Northeast-Southwest through the pit area and is sandwiched on either side by a massive impervious shale formation. Fifteen (15) drill holes drilled to a depth of 20 feet were explored for rock type and ground water. No ground water was encountered at explored depths. Mineral exploration and mining in this area indicates a series of anticlines and synclines cut off by natural erosion. Therefore, the continuity of the gypsum bed was terminated down dip from the put area (see figure 1).



A Class IIIb landfill is exempt from the normal water monitoring requirements of Rule 315-308, system (R315-304-5,4(c))

B-6 Contingency plans for other releases, e.g. explosive gases or failure of run-off collection system (R315-302—2(2)(f)):

B-6-1: Due to the nature of Wallboard, there is no chance for any of the waste material to self combust or to decompose into explosive gases. Therefore, no contingency plans for

fire or explosion are needed. With regard to the possibility of a failure of run-off collection or diversion, the Landfill is located in a bowl and designed in such a manner that run-off will not wash out material nor will it wash out the final closure cap (See Picture 2 & 3 below).



Picture 2: The Phase 1 Landfill is located in a bowl, with small outlying hills that protect it. Photo taken 8/24/07



Picture 3: Phases 2, 3, & 4 are located in a similar bowl, with small outlying hills that protect it. Photo taken 9/19/07

Heavy run-off would only settle in the bowl and would be quickly absorbed into the material. If ever needed, the following equipment would be available to build any berms, dig any trenches, and other activities related to controlling run-off:

- Two (2) Front-end loaders
- Two (2) Haul trucks (40 & 35 ton)
- Two (2) Bulldozers with rippers
- Road Grader
- Backhoe

B-7 A plan to control fugitive dust generated from roads, construction, general operations, and covering the waste (R315-302-2(g)):

B-7-1: U.S. Gypsum has a 6,000 gallon water truck on site and it is equipped to spray the roads, the landfill area, and any other operation related to the landfill in order to control fugitive dust.

B-8 Description of maintenance of installed equipment (R315-302-2(h)):

B-8-1: A Class IIIb landfill is exempt from the normal water monitoring requirements of Rule R315-308, as per Solid Waste Permitting and Management Rules R315-304-5, 4(c).

B-9 Procedures for excluding the receipt of hazardous or PCB containing waste (R315-302-2(2)(i)):

B-9-1: Operators will inspect material as they load it onto the trucks to be hauled to the landfill. Only material that is described in A-4-1 is contained in the waste bunker. Therefore, with no PCB or hazardous materials allowed in the waste bunker, there is no training required of the operators to identify these materials.

B-10 Procedures for controlling disease vectors (R315-302-2(2)(j)):

B-10-1: The materials being placed in the site are not considered a food source for any possible disease Vectors.

B-11 A plan for alternative waste handling (R315-302-2(2)(k)):

B-11-1: White's Sanitation, located in Richfield Utah, will serve as an alternate waste handling source, if necessary. USG confirmed with Max White on September 24, 2007 that they could handle any and all waste requirements, if needed. White's currently handles all other waste at the plant.

B-12 A general training and safety plan for site operations (R315-302-2(2)(n)):

B-12-1: U.S. Gypsum Company follows strict Mine Safety and Health Administration guidelines for general training and safety. The Landfill is located in the Quarry and falls under MSHA jurisdiction and therefore all work conducted in the landfill is consistent with all MSHA safety and training requirements (See Appendix R).

B-13 How the facility will meet the requirements of Rule R315-304 (R315-310-5(2)(f)):

B-13-1: Application is for a Class IIb Landfill.

B-14 Any other site specific information pertaining to the plan of operation required by the Executive Secretary (R315-302-2(2)(o)):

B-14-1: The new landfill permit is to include the original 9.36 acres as well as an area to the southwest that includes an additional 18.41 acres. No filling of the additional landfill area (Phases 2, 3, & 4) will take place until proper notice is given to the Executive Secretary (See Picture 4 below).



Picture 4: Phases 2, 3, & 4 are located directly southwest of Phase 1 in the same gypsum mined-out pit. Photo taken 9/19/07

C- PART III TECHNICAL REPORT

MAPS:

C-1: Topographic map drawn to the required scale and contours showing the boundaries of the landfill unit; design and location of the run-on/run-off control structures; (R315-310-4(2)(a)(i))(See Appendix B, C, D, E).

C-2: Most recent U.S. Geological Survey topographic map, 7-1/2 minute series, showing the waste facility boundary; the property boundary; surface drainage channels; existing utilities and structures within one-fourth mile of the site; and the direction of the prevailing winds (R315-310-4(2)(a)(ii))(See Appendix B, C, D, E).

D- ENGINEERING REPORT- PLANS, SPECIFICATIONS, AND CALCULATIONS

D-1 Cell design, cover design, fill methods, elevation of final cover including plans and drawings (R315-310-3(1)(b)):

D-1-1: During the mining operation at the N-1 Pit, shale was stripped from the sides of the exposed gypsum bed along the ridge. This material will be utilized as cover for

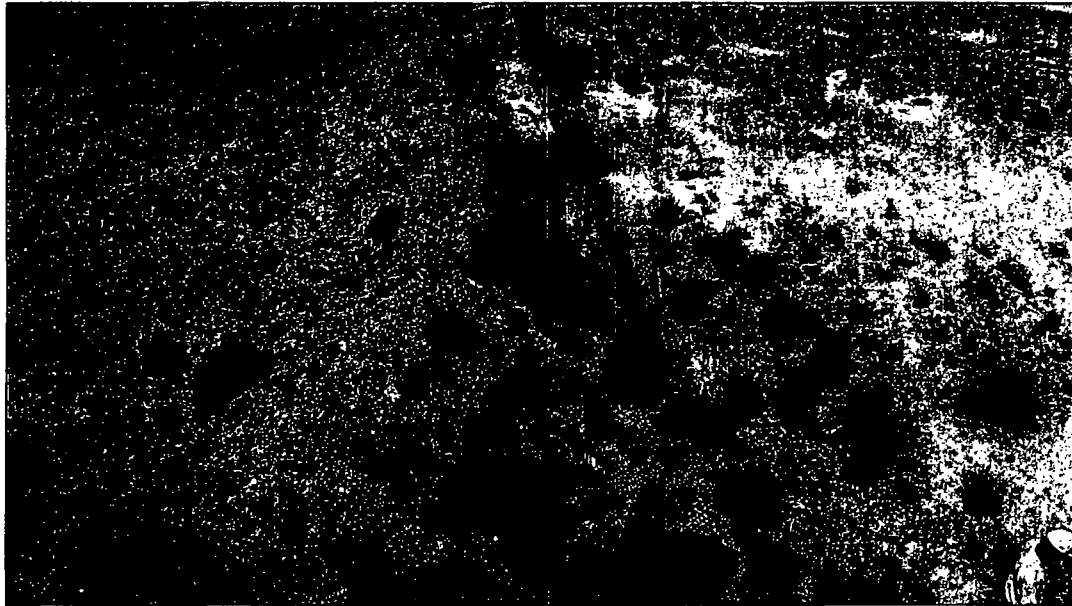
operational purposes. After the N-1 Pit has been filled to capacity, decomposed shale, gypsite, and available topsoil will be utilized for the required two feet of cover (See **Appendix S**). The entire disturbed area will be recontoured and all necessary drainage will be reestablished. To encourage plant growth, native species of big sagebrush, shadscale, rabbit brush, four wing salt brush, and Indian rice grass will be planted along with 200 lbs/acre of Diammonium Phosphate Fertilizer in order to provide the necessary nutrients. After the area is contoured, seed is spread by hand, and then the ripper of the Bulldozer is used to till in the seed.

D-2 Design and location of run-on and run-off control systems (R315-310-5(2)(b)):

D-2-1: As mentioned in B-6-1, the design and location of the landfill is such that run-on and run-off will not be a problem. (See pictures 5 & 6) Berms will be formed around the Landfill Phases 2, 3, and 4 before any filling takes place.



Picture 5: The landfill is surrounded with either hills or berms. Photo taken 8/24/07



Picture 6: Berms on the west hillside prevent any run-on. The Phase 1 landfill is on the right of the picture. Photo taken 8/24/07

E- CLOSURE PLAN (r315-310-3(1)(h) and R315-310-5(2)(c))

E-1 Closure schedule (R315-310-4(2)(d)(i)):

E-1-1: Using the current rate of fill, as reported in B-1&2&3-1, Sigurd's Phase 1 landfill will close during the year 2046. U.S. Gypsum will utilize equipment and manpower from the active mining operation to complete all reclamation required.

E-2 Design of final cover (R315-310-4(2)(c)(iii) and R315-305-3(5)):

E-2-1: There will be 2 feet of "cap", 6 inches of which will be typical indigenous topsoil. The Code of Solid Waste Disposal Regulations adopted by Utah Solid and Hazardous Waste Committee will be followed in regards to this requirement and all other Class III landfill regulations. Due to ongoing mining operations in the near vicinity, the following equipment will be available for excavation, compaction, spreading, and other related activities.

- Two (2) Front-end loaders
- Two (2) Haul trucks (40 & 35 ton)
- Two (2) Bulldozers with rippers
- Road Grader
- Backhoe

E-3 Capacity of site in volume and tonnage (R315-310-4(2)(d)(ii)):

E-3-1: U.S. Gypsum's, Sigurd Plant Phase 1 landfill has a total site capacity of 315,247 cubic yards or 63,049 tons. Current fill to date is 190,765 cubic yards, or 38,153 tons. Remaining capacity is 124,482 cubic yards, or 24,896 tons. The Phase 2 landfill has an estimated capacity of 42,302 tons, or 211,511 cubic yards based on Phase 1's acreage-volume percentage. The Phase 3 landfill has an estimated capacity of 35,162 tons, or

175,811 cubic yards. The Phase 4 landfill has an estimated capacity of 46,546 tons, or 232,730 cubic yards.

E-4 Final inspection by regulatory agencies (R315-310-4(2)(c)(iii):

E-4-1: Final inspection will be performed by the appropriate regulatory agencies.

F- POST-CLOSURE PLAN (R315-310-3(1)(h))

F-1 Site monitoring, if required (R315-310-4(2)(e)(i)):

F-1-1: A Class IIIB landfill is exempt from the normal water monitoring requirements of Rule R315-308, as per Solid Waste Permitting and Management Rules R315-304-5,4(c).

F-2 Changes to record of title, land use, and zoning restrictions (R315-310-4(2)(e)(ii)):

F-2-1: No zoning exists on the site. The general surrounding area is controlled by the Bureau of Land Management as a multiple use area. The County Recorders Office will be notified in writing of any changes or when the landfill is closed so they can make note of it.

F-3 Maintenance activities to maintain cover and run-on/run-off control systems (R315-310-4(2)(e)(iii)):

F-3-1: Existing Design and location should prevent run-on or run-off and keep the final cover from eroding. To ensure maintenance, the site will be inspected annually, even if the plant shuts down and the company flies someone in. If repairs are required, then the plant or a contractor will do them.

F-4 List the name, address, and telephone number of the person or office to contact about the facility during the post-closure care period (R315-310-4(2)(e)(v)):

F-4-1: If you have any questions currently or during the post closure/closure, please contact the following person:

Clay Shumway- Quarry/Mill Manager
81 North State Street
Work # (435) 896-2431
Fax#: (435) 896-2458

G- FINANCIAL ASSURANCE (R315-310-3(1)(j))

G-1 Identification of closure costs including cost calculations (R315-310-4(2)(d)(iv)):

G-1-1: Closure costs and calculations for the Phase 1 landfill are included in **Appendix T** and come to a total cost of \$395,171.

G-2 Identification of post-closure care costs including cost calculations (R315-310-4(2)(e)(iv)):

G-2-1: Post-closure care costs are \$120,000 (**Appendix T**). Once the closure of the site is done, there should be no further work required and there is no hazardous material or gases that would require any monitoring. The design and location are sufficient that there should be no problems of run-on or run-off that would require additional work or costs. However, the post closure costs have been estimated to include an annual inspection for

30 years and assuming a worst case scenario of extreme flooding every 10 years that would require some repair work.

G-3 Identification of the financial assurance mechanism that meets the requirements of Rule R315-309 and the date the mechanism will become effective (R315-309-1(1)):

G-3-1: A letter of credit will be issued as financial assurance per requirements above and will be effective on the date indicated on the letter. (See Appendix U)

H- SPECIAL REQUIREMENTS FOR A CLASS IIIa LANDFILL (R315-304-5(7)(b))

H-1 A geohydrological assessment of the site (R315-310-4(2)(b))

H-2 An engineering report, plans, specifications, and calculations (R315-310-4(2)(c))

H-3 A ground water monitoring plan (R315-304-5(4) and R315-310-4(2)(c)(vi))

H-4 A closure plan that meets the requirements of R315-303-3(4)(R315-304-5(2)(a))

H-1&2&3&4-1 This is an application for a Class IIIb Landfill

APPENDIX

- A. October 27, 1993 State of Utah Division of Oil, Gas, and Mining Variance Approval Letter
- B. Sigurd Quadrangle, Utah- Sevier Co., 7.5 Minute Series Topographic with Jumbo Class III Landfill Location
- C. Detail of Jumbo Class III Solid Waste Landfill and Proof of Ownership
- D. Detail of Jumbo Class III Solid Waste Landfill and Google Earth Photos of Landfill.
- E. Typical Cross Section of Jumbo Class III Solid Waste Landfill
- F. U.S. Gypsum Landfill Tonnage Record
- G. Daily Quarry Inspection Record (Landfill is included in this inspection)
- H. Sheetrock Gypsum Panel MSDS
- I. Sheetrock Brand Topping Joint Compound Ready Mix MSDS
- J. Sheetrock Topping Joint III Compound Ready Mixed MSDS
- K. Sheetrock Lightweight All Purpose Joint Compound Plus 3 Ready Mixed MSDS
- L. Sheetrock Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control MSDS
- M. Sheetrock Two-Purpose Joint Compound- Total Ready Mixed MSDS
- N. Sheetrock Lightweight Topping Joint Compound Topping Lite Ready Mix MSDS
- O. Sheetrock Taping Joint Compound
- P. Sheetrock All Purpose Joint Compound MidWeight Ready Mixed MSDA
- Q. Total Light Joint Compound- Ready Mixed MSDS
- R. Mine Safety Health Administration Training Program
- S. Drawing of Final Cover
- T. Closure Cost Estimate
- U. Financial Assurance

APPENDIX A



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

RECEIVED

OCT 29 1993

U.S. GYPSUM
SIGURD, UTAH 84657

October 27, 1993

Mr. Larry Pawlosky
Quarry/Mill Manager
U. S. Gypsum
P. O. Box 160
Sigurd, Utah 84657-0160

Re: Approval of Plan Amendment - Solid Waste Landfill/Dump Proposal, U. S. Gypsum, Jumbo-Jensen Quarry, M/041/008, Sevier County, Utah.

Dear Mr. Pawlosky:

Thank you for your August 20, 1993, letter which forwarded a Notice of Intention to Revise Mining Operations. The notice proposes a permit amendment to construct a solid waste landfill. Your application meets the requirements of the Utah Mined Land Reclamation Act and Minerals rules. The Division hereby approves of your landfill proposal *with the following condition*:

The construction of a solid waste dump/landfill facility may require acquisition of a solid waste permit from the Utah Department of Environmental Quality/Division of Solid and Hazardous Waste (DSHW). Please contact Roy Van Os, (801) 538-6170, of DSHW for information regarding their permitting requirements.

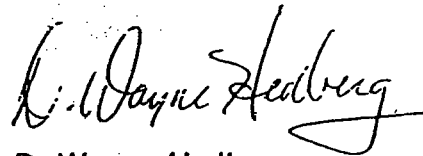
If DSHW requires a permit for this proposal, then U. S. Gypsum agrees to provide DOGM with written notification that a plan (permit application) has been filed with DSHW, for the construction of a solid waste landfill/dump.

Our approval will become effective upon U. S. Gypsum's receipt of all appropriate permits/approvals for this proposal. Please copy this office with any correspondence (cover letter only), related to the landfill, that is sent to DSHW.

Page 2
Mr. Larry Pawlosky
M/041/008
October 27, 1993

Thank you for your patience and assistance in finalizing this permitting action. Please contact me, Holland Shepherd, or Travis Jones of my staff, should you have any remaining questions or concerns in this regard.

Sincerely



D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
cc: Roy Van Os, Div Solid & Hazardous Waste
Travis Jones, DOGM
Holland Shepherd, DOGM
M041008.amd

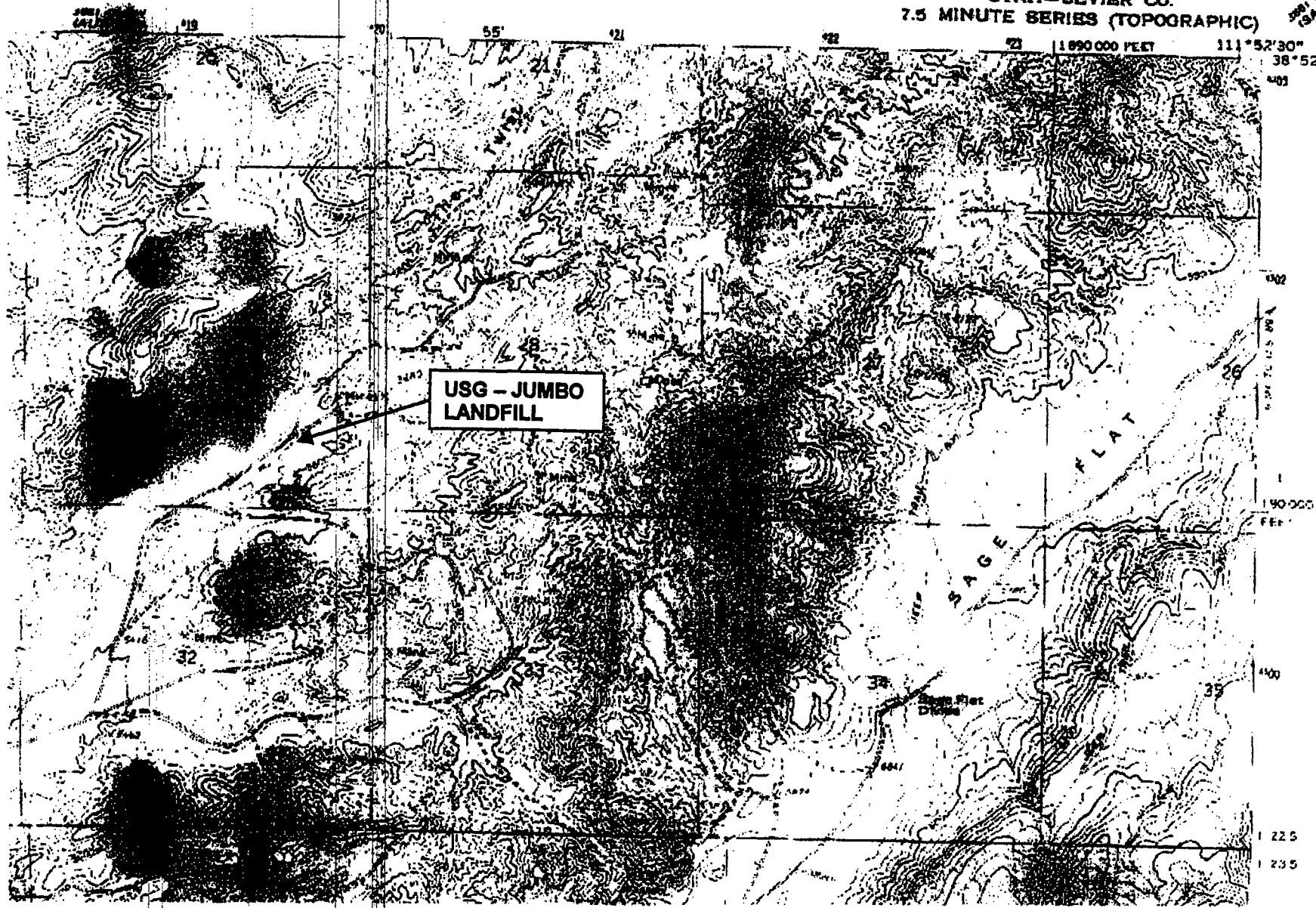
APPENDIX B

SIQUARD QUADRANGLE
UTAH-SEVIER CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

38° 14' 30" N
111° 52' 30" W
(SALINIA)

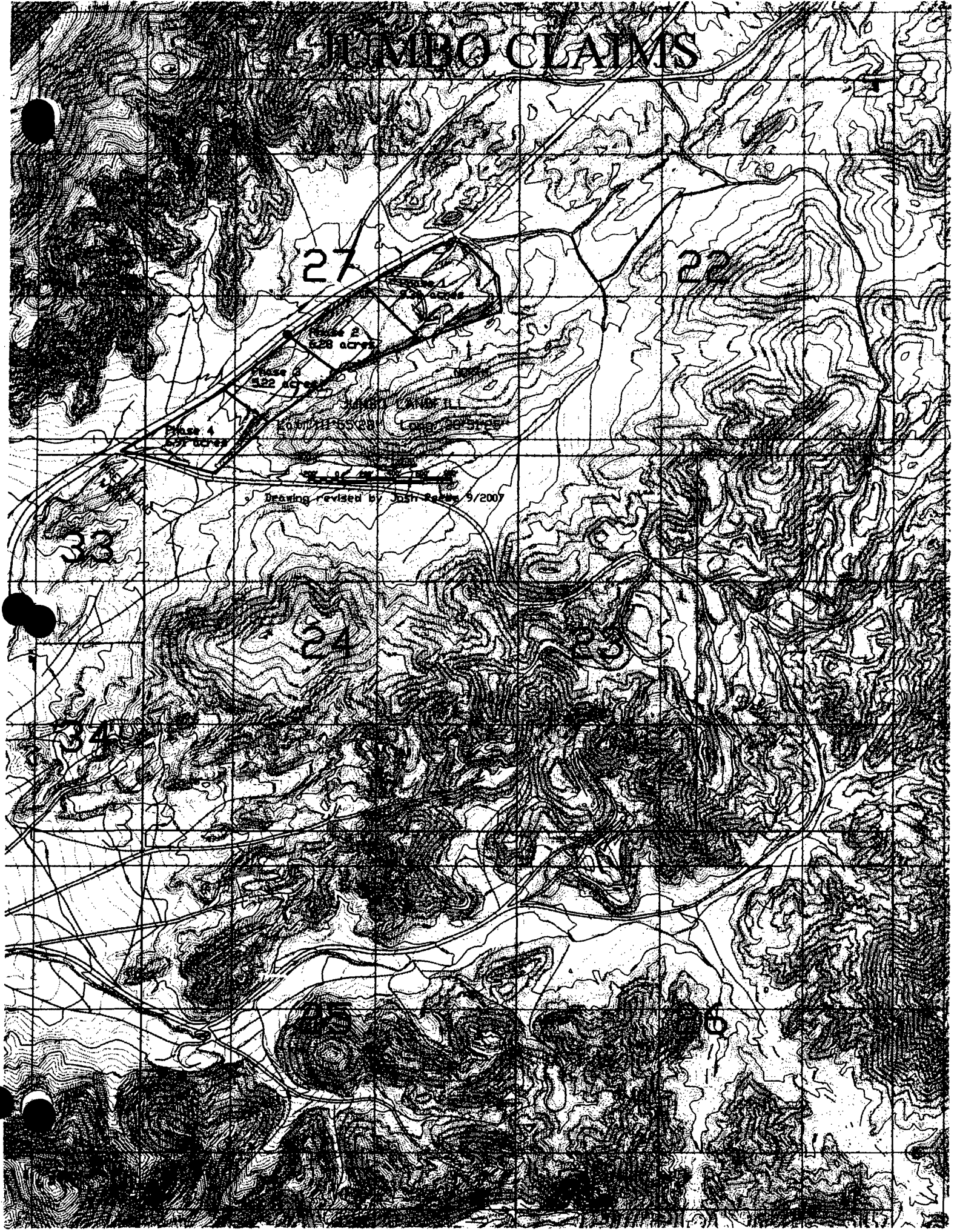
1:890,000 FEET
111° 52' 30" W
38° 52' 30" N

USG - JUMBO
LANDFILL



APPENDIX C

JUNIBO CLAIMS



27

Phase 1
9.36 acres

Phase 2
6.28 acres

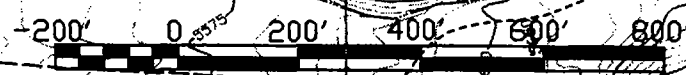
Phase 3
5.22 acres

Phase 4
6.91 acres

JUMBI LANDFILL

Lat. 111°55'28"

Long. 38°51'25"



Drawing revised by Josh Reese 9/2007

PRELIMINARY
DRAWING

D E E D

JUMBO PLASTER & CEMENT COMPANY, a Utah corporation, with its principal office at Richfield, Utah, GRANTOR, hereby grants, bargains, sells, remises, releases and forever quit-claims to UNITED STATES GYPSUM COMPANY, an Illinois corporation, with its principal office at Chicago, Illinois, GRANTEE, for the sum of Ten (\$10.00) Dollars and other valuable consideration, the receipt of which is acknowledged by the Grantor, all of the right, title and interest of the Grantor in and to the following described placer mining claims situate in Township 22 South, Range 1 West, Salt Lake Base and Meridian in an unorganized mining district, Sevier County, State of Utah, and all of the right, title and interest of the Grantor in and to the property covered thereby whether by virtue of the said placer mining locations or any other placer mining locations or otherwise:

p / Jumbo Gypsum No. 22 placer mining claim embracing the SW $\frac{1}{4}$ of Section 28;

p / Jumbo Gypsum No. 23 placer mining claim embracing the NW $\frac{1}{4}$ of Section 33;

p Jumbo Gypsum No. 24 placer mining claim embracing the NE $\frac{1}{4}$ of Section 32;

p Jumbo Gypsum No. 25 placer mining claim embracing the SE $\frac{1}{4}$ of Section 32;

p Jumbo Gypsum No. 26 placer mining claim embracing the SW $\frac{1}{4}$ of Section 33;

p Jumbo Gypsum No. 27 placer mining claim embracing the SE $\frac{1}{4}$ Section 29;

p Jumbo No. 33 placer mining claim embracing the E $\frac{1}{2}$ of NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Section 32;

p Jumbo No. 34 placer mining claim embracing the E $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$ Section 32.

Together with all minerals therein and all privileges and franchises and appurtenances thereto incident or belonging or therewith used and enjoyed, and all the estate, right, title, interest, property, claim and demand whatsoever, legal and equitable, as well in possession as in expectancy of the Grantor in or to said premises and every part thereof.

WITNESS the hand of said Grantor this 17th day of December, 1936.

JUMBO PLASTER & CEMENT COMPANY

By W. P. Payne
President

By Carroll Payne
Secretary



STATE OF UTAH)
): SS
COUNTY OF SEVIER)

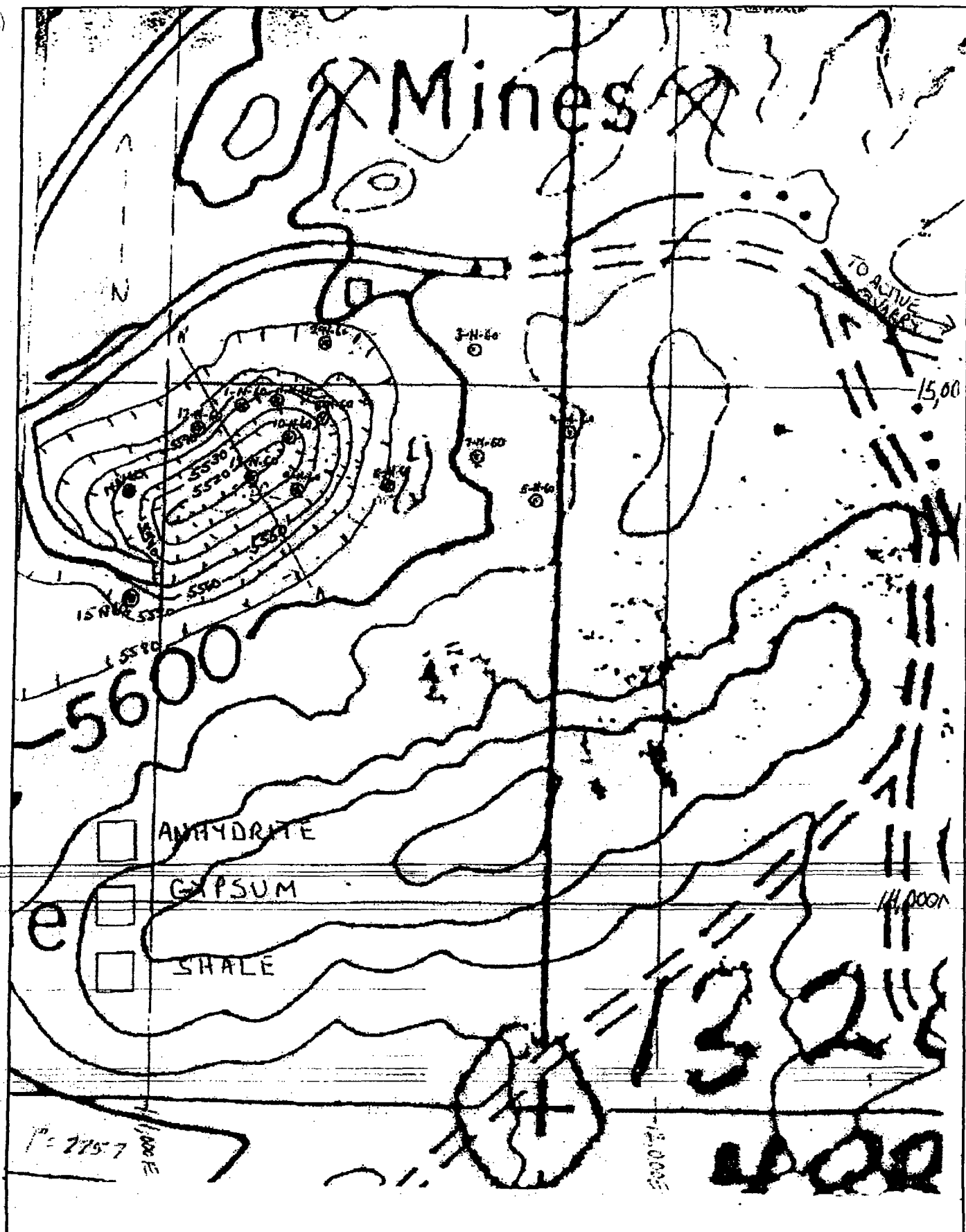
On the 17th day of December , A. D. 1936, personally appeared before me W. P. Payne and Carroll Payne, known to me to be the President and Secretary respectively, of the Jumbo Plaster & Cement Company, the signers of the above instrument, who duly acknowledged to me that they executed the same, for and in behalf of said Jumbo Plaster & Cement Company, by due and legal authority vested in them as President and Secretary thereof.

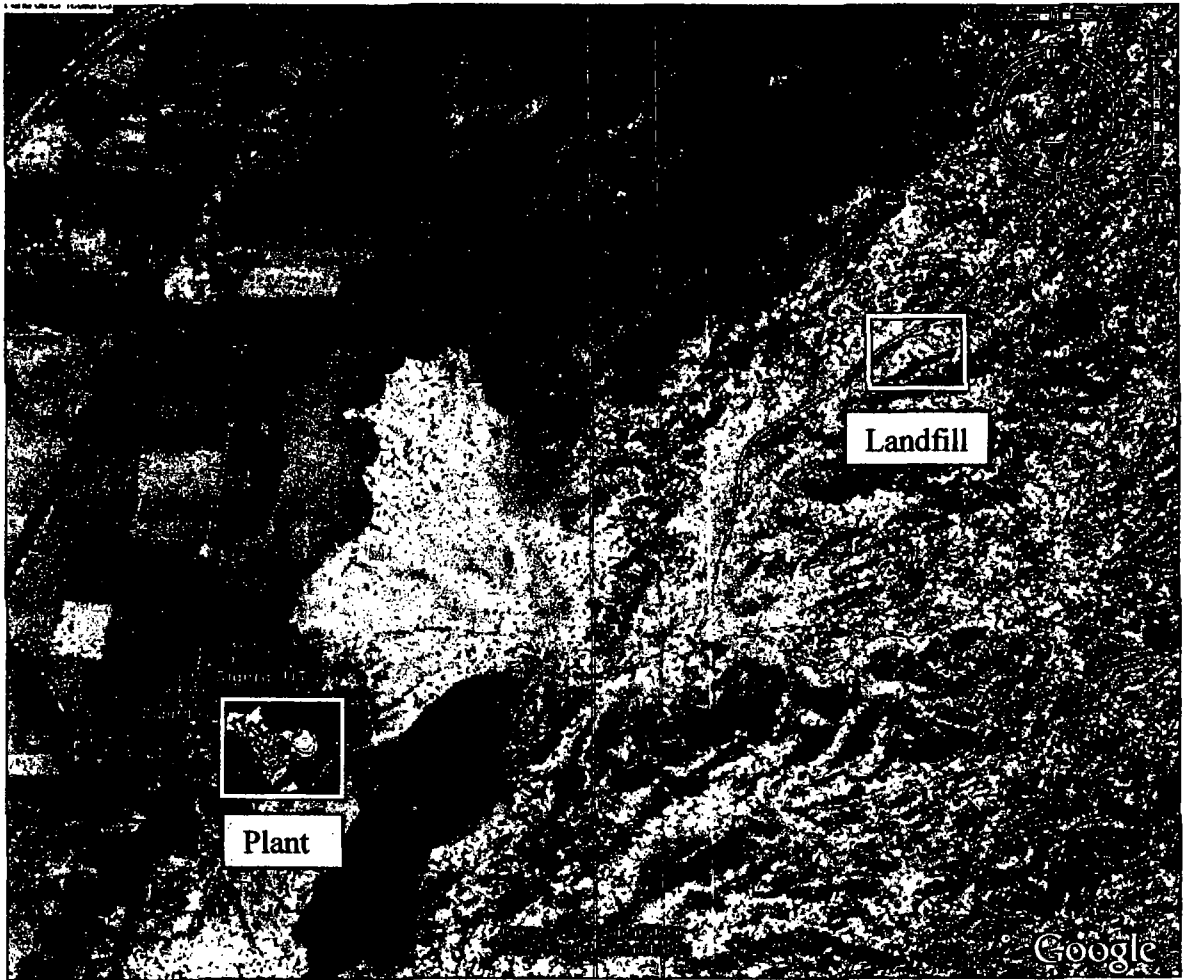
My commission expires:

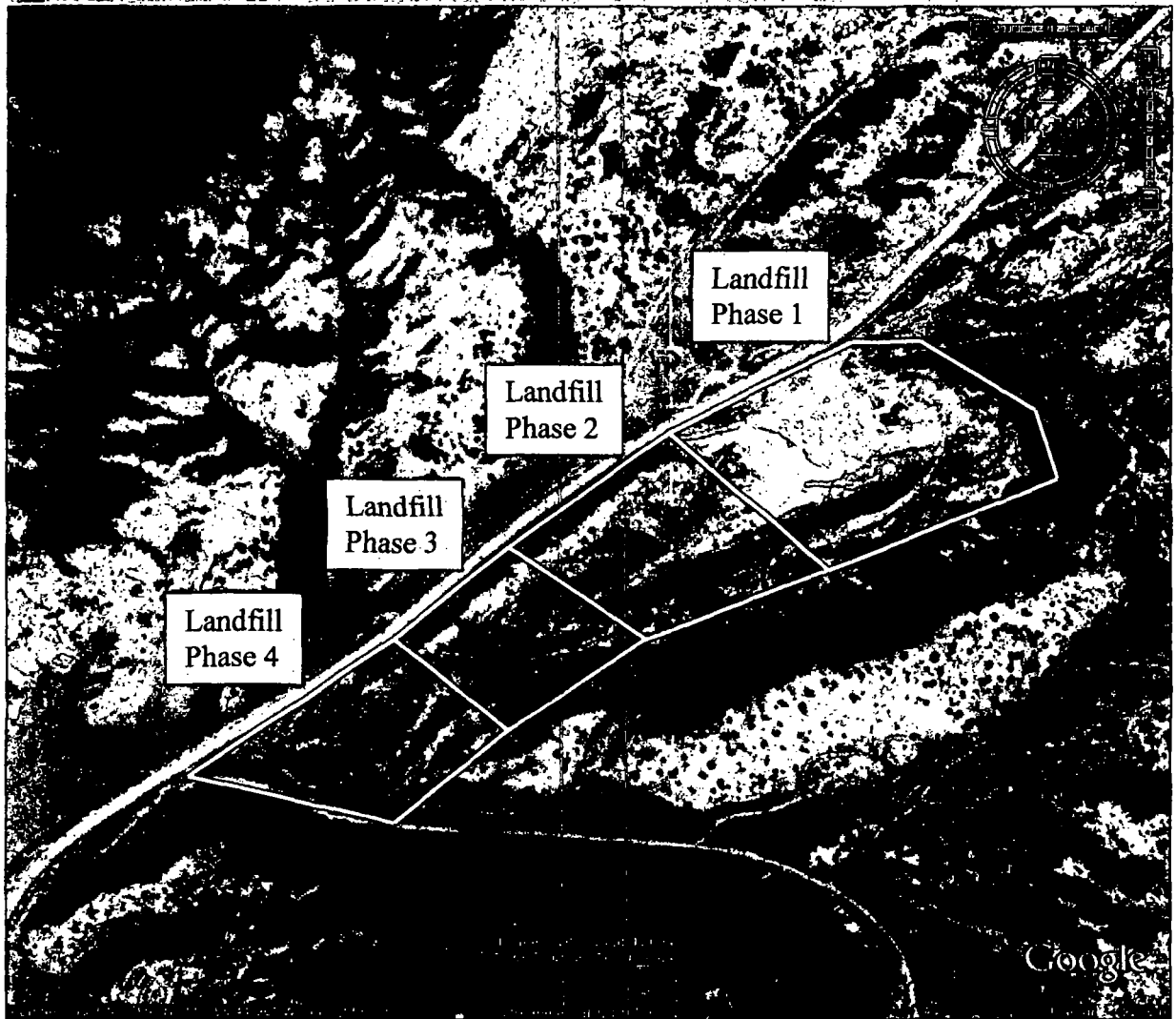
April 16, 1937.

Dorothy Baker
Notary Public, residing at
Richfield, Utah.

APPENDIX D

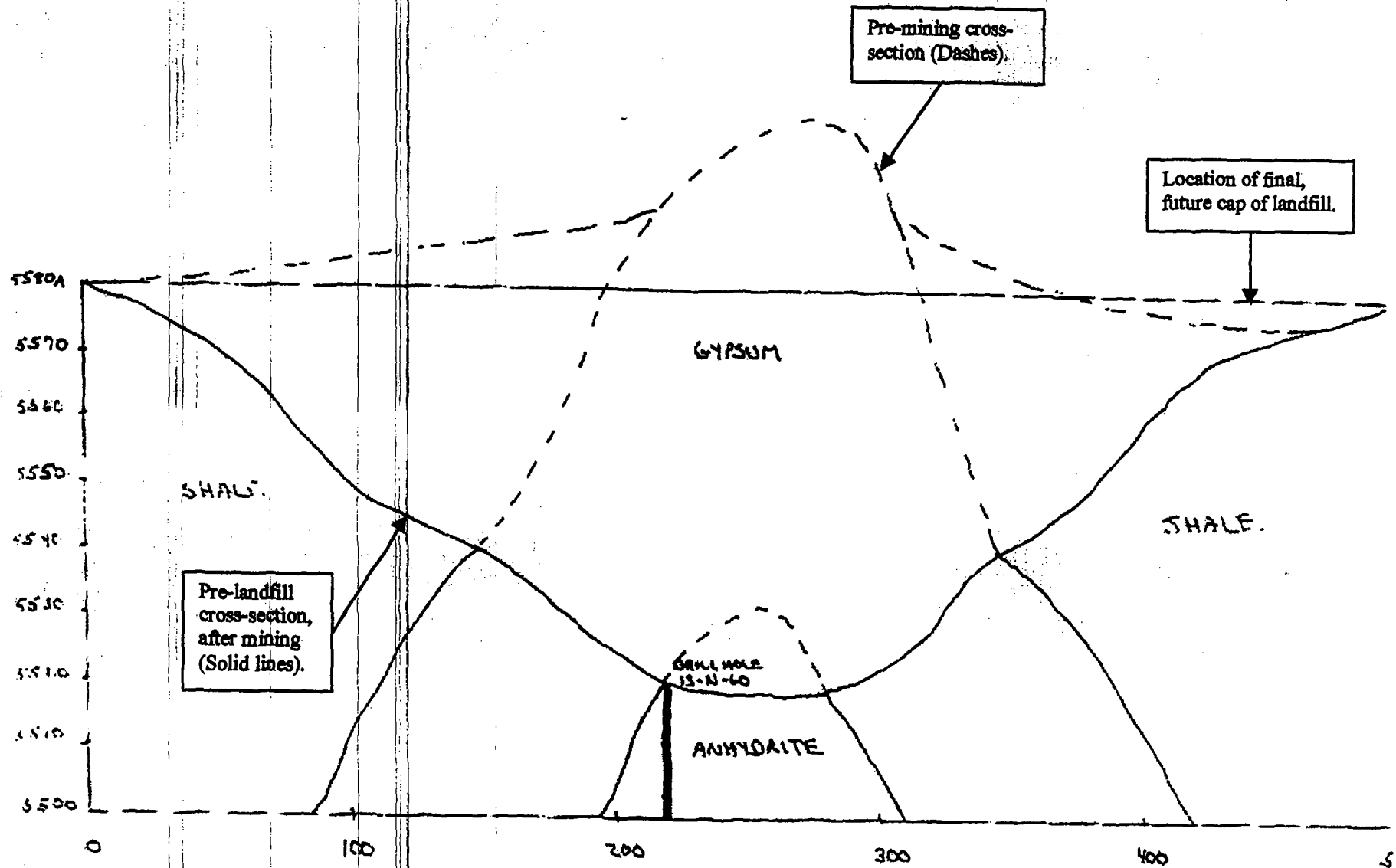






APPENDIX E

TYPICAL CROSS SECTION A-A'



APPENDIX F

[illegible]

APPENDIX G

Date: _____

Daily Quarry Inspection

PIT NAME					
Ground Control Inspection:					
Corrections:					
Explosives Magazine Inspection:					
Corrections:					
Blasted Muck Pile Inspections:					
Corrections:					
Drill Area Inspection:					
Corrections:					
HAULAGE INSPECTION:					
Trimming Loads:					
Berms:					
Operating Speeds:					
Dust Control:					
Equipment Parking:					
Housekeeping					
LANDFILL INSPECTION:					
Gate secured during off hours?					
Any improper materials?					
Anyone trespassing?					
Hazards in dump?					
Condition of road					
Fugitive Dust Concerns?					
Run-off Concerns?					
If dump closed, is cover intact?					
Tons of material disposed:					

COMMENTS:

APPENDIX H



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 9, 2003
Version: 4

PRODUCT: USG SHEETROCK® Brand Gypsum Panels
SYNONYM: Gypsum board

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Gypsum (CaSO ₄ •2H ₂ O)	>85	10	15 (T) / 5 (R)	13397-24-5
Cellulose	<10	10	15 (T) / 5 (R)	9004-34-6
Starch	<3	10	15 (T) / 5 (R)	9005-25-8
Crystalline Silica	<1	0.05 (R)	0.1 (R)	14808-60-7
May Contain:				
Fibrous Glass (Continuous Filament)	<1	1 f/cc	15 (T) / 5 (R)	65997-17-3
May be available with foil-backing:				
Aluminum Foil (as Aluminum and Cmpds)	<3	10	15 (T) / 5 (R)	7429-90-5
Ethylene Vinyl Acetate Polymer	<2	(NE)	(NE)	24937-78-8

(T) – Total (R) – Respirable (NE) – Not Established

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room.

The weight percent for fibrous glass (continuous filament) represents total fibrous glass and not the respirable fraction.



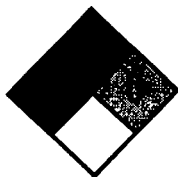
Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

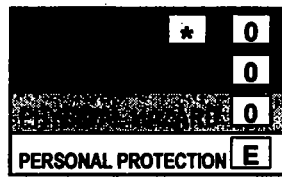
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye protection. Use gloves and NIOSH/MSHA-approved respiratory protection when required.

*Respirable crystalline silica can cause lung disease and/or cancer.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001

Page 2 of 8

EMERGENCY OVERVIEW

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.

ACUTE:

Eyes: Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: No toxic effects from powdered gypsum are noticed where air contains contaminate to excess. This material exhibits some affinity for moisture, and frequent exposures may have a drying effect on the skin. Possible itching and irritation may be experienced. This may lead to dermatitis. No penetration of intact skin.

Inhalation: Inhalation of dust can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: Unlikely to occur, but may cause gastric disturbances if swallowed. Gypsum is non-toxic; however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. See First Aid Measures - Ingestion (Section 4).

CHRONIC:

Inhalation: The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 Wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room.

Gypsum wallboard panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Eyes: None known.

Skin: Prolonged and repeated exposure may dry skin and possibly lead to dermatitis.

Ingestion: No known effects.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: No harmful effects expected. No specific recommendations. Calcium sulfate is nontoxic; however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. If gastric disturbance occurs, call physician. Drinking gelatin solutions or large volumes of water may delay setting.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 3 of 8

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire and Explosion Hazards:	None		
Hazardous Combustion Products:	Above 1450° C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO ₂). Organic material in the panels can produce oxides of carbon.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Limited combustible
Upper Flammable Limit (UFL):	Not Applicable	Classification:	
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8). Collect the material from spillage and if not damaged or contaminated by foreign material, gypsum panels may be reclaimed. Contain the spill by keeping it dry and away from incompatibles (See Section 10).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. If dry, shovel or sweep up material from spillage and place collected material into a container for recovery or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposures. If washed down, may plug drains.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8).

Minimize dust generation and accumulation. Use good safety and industrial hygiene practices.

When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4' extends beyond the supports on either end.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the jobsite.

Gypsum panels are very heavy awkward loads posing the risk of severe back injury. Use proper lifting techniques.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 4 of 8

STORAGE:

Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).

Protect product from physical damage.

Protect from weather and prevent exposure to sustained moisture.

Gypsum Association literature recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

ENGINEERING CONTROLS:

Good general ventilation should be sufficient to control airborne dust levels.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2).

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves [chemical gloves are not necessary, there is no chemical irritation hazard] and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

Appearance	Paper with gray to off white core
Physical State	Solid
Vapor Pressure	Not Applicable
Boiling Point	Not Applicable
Freezing Point	Not Applicable
Melting Point	1450° C - decomposes
Softening Point	Not Applicable
Solubility (H ₂ O)	0.26/100g
Viscosity	Not Applicable
Specific Gravity (H ₂ O = 1):	2.32 – 2.96

Odor	Low to no odor
pH @ 25 ° C	~ 7
Vapor Density (Air = 1)	Not Applicable
Vapor Pressure (mm Hg)	Not Applicable
Evaporation Rate (BuAc = 1)	Not Applicable
Percent Volatile	0
Particle Size	Not Applicable
Molecular Weight	~ 172
Bulk Density	~ 55 lb/ft ³



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 5 of 8

STABILITY: Stable in dry environments.
CONDITIONS TO AVOID: Contact with incompatibles.
INCOMPATIBILITY: None known.
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION: Above 1450° C - calcium oxide (CaO) and sulfur dioxide SO₂. Oxides of carbon.

ACUTE EFFECTS:

Gypsum paste applied experimentally to the eyes of rabbits was not an irritant.
Gypsum dust particulate has shown an irritant action on mucous membranes of the respiratory tract and eyes.
There have been anecdotal reports of conjunctivitis, chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose, and reactions of tracheal and bronchial membranes in exposed workers.
The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses.
Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters.
No evidence of mutagenicity was found in Ames bacterial tests.
LD₅₀: Not Available for product.
LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 Wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room.
Gypsum wallboard panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.
Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.
In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.
IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.
Ecotoxicity Values: Not determined.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 6 of 8

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Gypsum (CaSO ₄ •2H ₂ O)	>85	NL	NL	NL	NL	NL	NL
Cellulose	<10	NL	NL	NL	NL	NL	NL
Starch	<3	NL	NL	NL	NL	NL	NL
Crystalline Silica	<1	NL	NL	NL	NL	NL	NL
May Contain:							
Fibrous Glass (Continuous Filament)	<1	NL	NL	NL	NL	NL	NL
May be available with foil-backing:							
Aluminum Foil (as Aluminum and Cmpds)	<3	NL	NL	X	NL	NL	NL
Ethylene Vinyl Acetate Polymer	<2	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 7 of 8

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Gypsum (CaSO ₄ •2H ₂ O)	>85	Not Listed	Not Listed
Cellulose	<10	Not Listed	Not Listed
Starch	<3	Not Listed	Not Listed
Crystalline Silica	<1	1406	D2A
May Contain:			
Fibrous Glass (Continuous Filament)	<1	Not Listed	Not Listed
May be available with foil-backing:			
Aluminum Foil (as Aluminum and Cmpds)	<3	47	Not Listed
Ethylene Vinyl Acetate Polymer	<2	Not Listed	Not Listed

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

- 1- Carcinogenic to humans
- 2A – Probably carcinogenic to humans
- 2B – Possibly carcinogenic to humans
- 3 - Not classifiable as a carcinogen
- 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

- 1- Known to be carcinogen
- 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

- A1 – Confirmed human carcinogen
- A2 – Suspected human carcinogen
- A3 – Animal carcinogen
- A4 - Not classifiable as a carcinogen
- A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Gypsum Panels

MSDS # 54-000-001
Page 8 of 8

Label Information

⚠WARNING!

Follow good safety and industrial hygiene practices during the handling and installing of all products and systems. Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not ingest. If ingested, call physician. Panels are heavy and can fall over, causing serious injury or death. Avoid creating a tripping hazard and do not exceed floor limit loads.

Product safety information: (800) 507-8899 or www.usg.com **KEEP OUT OF REACH OF CHILDREN.**

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety
USG Corporation
125 South Franklin St.
Chicago, Illinois 60606

END

APPENDIX I

USG MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 5

PRODUCT: USG SHEETROCK® Brand Topping Joint Compound Ready Mixed
CHEMICAL FAMILY: An aqueous mixture of minerals and an emulsion polymer

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>50	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Or Gypsum (CaSO ₄ •2H ₂ O)		10	15 (T) / 5 (R)	13397-24-5
Water	<35	(NE)	(NE)	7732-18-5
Mica	<5	3 (R)	20 mppcf	12001-26-2
Attapulgit	<5	(NE)	(NE)	12174-11-7
Vinyl Acetate Polymer	<5	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7
May Contain:				
Talc	<5	2 (R)	20 mppcf	14807-96-6

(T) – Total (R) – Respirable (NE) – Not Established mppcf - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



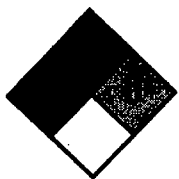
Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis).

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 2 of 8

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001

Page 3 of 8

General Fire Hazards:

Not expected to burn.

Extinguishing Media:

Water or use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures:

Wear appropriate personal protective equipment (See section 8).

Unusual Fire & Explosion Hazards:

None

Hazardous Combustion Products:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.

Flash Point:

None Known

Auto Ignition:

Not Applicable

Method Used:

Not Applicable

Flammability Classification:

Not Applicable

Upper Flammable Limit (UFL):

Not Applicable

Rate of Burning:

Not Applicable

Lower Flammable Limit (LFL):

Not Applicable

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 4 of 8

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.3-1.4	Particle Size	99% Finer than 250 microns
Softening Point	Not Applicable	Evaporation Rate	Not Applicable
Viscosity	450-700 Brabender Units at 20 °C	Bulk Density	1.3-1.4 Kg/Litre
Percent Volatile	48-50	Molecular Weight	Mixture
VOC Content	<2 g/l		

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 1450° C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001

Page 5 of 8

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001

Page 6 of 8

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>50	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Or Gypsum (CaSO4•2H2O)		NL	NL	NL	NL	NL	NL
Water	<35	NL	NL	NL	NL	NL	NL
Mica	<5	NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<5	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL
May Contain:							
Talc	<5	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

USG MATERIAL SAFETY DATA SHEET
USG SHEETROCK® Brand Topping Joint Compound Ready
Mixed

MSDS # 61-370-001
Page 7 of 8

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>50	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Or Gypsum (CaSO4•2H2O)		Not Listed	Not Listed
Water	<35	Not Listed	Not Listed
Mica	<5	1088	Not Listed
Attapulgit	<5	Not Listed	Not Listed
Vinyl Acetate Polymer	<5	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A
May Contain:			
Talc	<5	Not Listed	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

- 1- Carcinogenic to humans
- 2A – Probably carcinogenic to humans
- 2B – Possibly carcinogenic to humans
- 3 - Not classifiable as a carcinogen
- 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

- 1- Known to be carcinogen
- 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

- A1 – Confirmed human carcinogen
- A2 – Suspected human carcinogen
- A3 – Animal carcinogen
- A4 - Not classifiable as a carcinogen
- A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Topping Joint Compound Ready Mixed

MSDS # 61-370-001
Page 8 of 8

Label Information

⚠ WARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Prolonged and repeated breathing of respirable mica/talc dust may cause lung disease (pneumoconiosis). Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

Threshold Limit Value

TLV	Permissible Exposure Limit
PEL	Chemical Abstracts Service (Registry Number)
CAS	National Institute for Occupational Safety and Health
NIOSH	Mine Safety and Health Administration
MSHA	Occupational Health and Safety Administration
OSHA	American Conference of Governmental Industrial Hygienists
ACGIH	International Agency for Research on Cancer
IARC	United States Department of Transportation
DOT	United States Environmental Protection Agency
EPA	National Fire Protection Association
NFPA	Hazardous Materials Identification System
HMIS	Personal Protection Equipment
PPE	Toxic Substances Control Act
TSCA	Canadian Domestic Substances List
DSL	Canadian Non-Domestic Substances List
NDL	Superfund Amendments and Reauthorization Act of 1986
SARA	Resource Conservation and Recovery Act
RCRA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERCLA	United Nations/North America number
UN/NA#	Code of Federal Regulations
CFR	Workplace Hazardous Material Information System
WHMIS	

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX J



06153
Page 1/4

MATERIAL SAFETY DATA SHEET

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60606-4678

Date Issued: January 31, 1996
Product Safety: (800) 507-8899

SECTION I

**PRODUCT: SHEETROCK® Topping Joint III Compound
Ready Mixed**

CHEMICAL FAMILY: Aqueous mixture of limestone and latex

SECTION II INGREDIENTS

MATERIAL	Wt%	TLV mg/m ³	PEL mg/m ³	CAS NUMBER
Limestone	>50	10	15(T)/5(R)	1317-65-3
Water	<35	(NE)	(NE)	7732-18-5
Expanded perlite	<5	10	15(T)/5(R)	93763-70-3
Mica	<5	3(R)	3(R)	12001-26-2
Attapulgit	<5	(NE)	(NE)	12174-11-7
Vinyl acetate polymer	<5	(NE)	(NE)	9003-20-7
Silica-Crystalline, Respirable	trace	0.1(R)	0.1(R)	14808-60-7

(T) - Total (R) - Respirable (NE) - Not Established

***** This is a Non-Asbestos Product. *****

SECTION III PHYSICAL DATA

BOILING POINT: Approx. 212° F
SPECIFIC GRAVITY (H₂O = 1): 1.6
APPEARANCE AND ODOR: Off white paste; low odor.
HARDENING TIME: Varies. Check usage and/or product specification data for product.



SHEETROCK® Topping III Joint Compound, Ready Mixed

Page 2/4

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): Noncombustible
SPECIAL FIRE FIGHTING PROCEDURES: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT: None
EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

SECTION V HEALTH HAZARD DATA

Dust generated from this product would be considered a nuisance dust. This product can release nuisance dust if sanding. Eye, skin, nose, throat, and upper respiratory irritation can occur with prolonged exposure to dust.

EFFECTS OF OVEREXPOSURE:

ACUTE:

EYES: Direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

SKIN: May dry skin. Direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, then wash skin thoroughly with mild soap and water. If irritation persists, consult physician.

INHALATION: Inhalation of dusts from this product may irritate the nose, throat, lungs, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation from dust. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

INGESTION: No known effects.

CHRONIC: This material displays no specific toxic properties.

EYES: None known.

SKIN: None known.

INHALATION: Chronic overexposure to respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. Long-term inhalation of large amounts of respirable mica dust can cause lung damage (pneumoconiosis or pulmonary fibrosis).

INGESTION: No known effects.



SHEETROCK® Topping III Joint Compound, Ready Mixed

Page 3/4

**SECTION V
HEALTH HAZARD DATA
(Continued)**

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush thoroughly with water for 15 minutes to remove particles.

If irritation persists, consult physician.

SKIN: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing.

INHALATION: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

INGESTION: No harmful effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, and respiratory system.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTE OF ENTRY: Inhalation; Eye and/or Skin contact.

CARCINOGENICITY OF INGREDIENTS:

MATERIAL	IARC	NTP	OSHA
Respirable Crystalline Silica	2A	Anticipated	Not Listed

The quantity of respirable crystalline silica has not been determined in this product. Respirable crystalline silica is classified by IARC as a (2A) probable human carcinogen. Long-term breathing of large amounts of silica can cause lung disease (i.e., silicosis) and/or possibly lung cancer.

**SECTION VI
REACTIVITY DATA**

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY: None known.

HAZARDOUS DECOMPOSITION: CO₂ would be produced at high temperatures with the decomposition of limestone (~800°C).

**SECTION VII
SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear appropriate protective equipment. Shovel material from spillage into a waste container for disposal, or if not contaminated by foreign material it may be reclaimed for processing.

WASTE DISPOSAL METHOD: Dispose of material in accordance with Federal, State, and Local regulations.



SHEETROCK® Topping III Joint Compound, Ready Mixed

Page 4/4

SECTION VIII SPECIAL PROTECTION INFORMATION

No TLV assigned to this mixture, see Ingredients Section. Minimize exposures in accordance with good hygiene practice.

RESPIRATORY PROTECTION: Not typically necessary under normal conditions of use. Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients and to control dusting conditions. Avoid creating dust. Wear a NIOSH/MSHA-approved respirator in poorly ventilated areas, if TLV is exceeded, and/or when dusty conditions exist to guard against nuisance particles. Dust created from dry sanding may cause eye, nose, throat or upper respiratory irritation.

VENTILATION: Ventilate to keep exposures below TLV. General ventilation is expected to be satisfactory. Use local exhaust ventilation if necessary to control dust.

PROTECTIVE EQUIPMENT: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. Wear adequate clothing to minimize chafing or drying of skin. Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Minimize exposures in accordance with good hygiene practice. During handling wear the appropriate respiratory, eye and skin protection if warranted per environmental conditions.

When finishing joints using these products, wet-sanding is recommended. See "Finishing and Decorating Gypsum Panels - Wet Sanding, J-610/12-87". Avoid freezing.

Δ WARNING

Dust can be generated during sanding. Dust may cause eye, skin, nose, throat, or respiratory irritation. Avoid inhalation of dust and eye contact. Prolonged and repeated exposures of mica dust may cause lung disease. Avoid generating dust by wet-sanding. If dusty, wear a NIOSH/MSHA-approved respirator. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not ingest. If ingested and any discomfort occurs, call physician. Product safety information: (800) 507-8899.

KEEP OUT OF REACH OF CHILDREN.

APPENDIX K

USG MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 6

PRODUCT: USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed
CHEMICAL FAMILY: An aqueous mixture of minerals and an emulsion polymer

MATERIAL	WT%	TLV (mg/m³)	PEL (mg/m³)	CAS NUMBER
Limestone	>35	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Or Gypsum (CaSO4•2H2O)		10	15 (T) / 5 (R)	13397-24-5
Water	>40	(NE)	(NE)	7732-18-5
Expanded Perlite	<10	10	15 (T) / 5 (R)	93763-70-3
Vinyl Acetate Polymer	<10	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Attapulgate	<5	(NE)	(NE)	12174-11-7
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



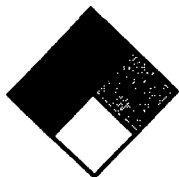
Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 2 of 8

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 3 of 8

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability Classification:	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Rate of Burning:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable		

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 4 of 8

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.3-1.4	Particle Size	99% Finer than 250 microns
Softening Point	Not Applicable	Evaporation Rate	Not Applicable
Viscosity	450-700 Brabender Units at 20 °C	Bulk Density	1.3-1.4 Kg/Litre
Percent Volatile	48-50	Molecular Weight	Mixture
VOC Content	<2 g/l		

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 1450° C – decomposes to calcium oxide (CaO) and sulfur dioxide (SO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.

USG MATERIAL SAFETY DATA SHEET
USG SHEETROCK® Brand Lightweight All Purpose Joint
Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 5 of 8

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002
Page 6 of 8

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>35	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Or Gypsum (CaSO4•2H2O)		NL	NL	NL	NL	NL	NL
Water	>40	NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<10	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).



Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Lightweight All Purpose Joint Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 7 of 8

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>35	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Or Gypsum (CaSO ₄ •2H ₂ O)		Not Listed	Not Listed
Water	>40	Not Listed	Not Listed
Expanded Perlite	<10	Not Listed	D2A
Vinyl Acetate Polymer	<10	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Attapulgite	<5	Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"

USG MATERIAL SAFETY DATA SHEET
USG SHEETROCK® Brand Lightweight All Purpose Joint
Compound Plus 3™ Ready Mixed

MSDS # 61-370-002

Page 8 of 8

Label Information

⚠ WARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

Threshold Limit Value

TLV	Permissible Exposure Limit
PEL	Chemical Abstracts Service (Registry Number)
CAS	National Institute for Occupational Safety and Health
NIOSH	Mine Safety and Health Administration
MSHA	Occupational Health and Safety Administration
OSHA	American Conference of Governmental Industrial Hygienists
ACGIH	International Agency for Research on Cancer
IARC	United States Department of Transportation
DOT	United States Environmental Protection Agency
EPA	National Fire Protection Association
NFPA	Hazardous Materials Identification System
HMIS	Personal Protection Equipment
PPE	Toxic Substances Control Act
TSCA	Canadian Domestic Substances List
DSL	Canadian Non-Domestic Substances List
NDSL	Superfund Amendments and Reauthorization Act of 1986
SARA	Resource Conservation and Recovery Act
RCRA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERCLA	United Nations/North America number
UN/NA#	Code of Federal Regulations
CFR	Workplace Hazardous Material Information System
WHMIS	

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX L



MATERIAL SAFETY DATA SHEET

MSDS # 61-362-001

SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control

Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 13, 2006
Version: 2

PRODUCT: SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control
CHEMICAL FAMILY: An aqueous mixture of minerals and vinyl acetate polymer

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Water	>35	(NE)	(NE)	7732-18-5
Limestone	>35	10	15 (T) / 5 (R)	1317-65-3
Expanded Perlite	<15	10	15 (T) / 5 (R)	93763-70-3
Blend of Proprietary Ingredients	<10	10	15 (T) / 5 (R)	Proprietary
Crystalline Silica	<5	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



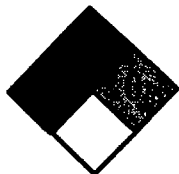
Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

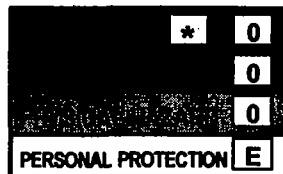
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control

MSDS # 61-362-001

Page 2 of 8

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

MSDS # 61-362-001

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

Page 3 of 8

HAZARD IDENTIFICATION

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

PHYSICAL AND CHEMICAL PROPERTIES

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

ENVIRONMENTAL

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).
Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

MSDS #61-362-001

SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control

Page 4 of 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

STABILITY AND REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

MSDS # 61-362-001

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

Page 5 of 8

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

MSDS #61-362-001

SHEETROCK® Brand Lightweight All Purpose Joint Compound

Page 6 of 8

Ready Mixed Plus 3 with Dust Control

TRANSPORTATION INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Water	>35	NL	NL	NL	NL	NL	NL
Limestone	>35	NL	NL	NL	NL	NL	NL
Expanded Perlite	<15	NL	NL	NL	NL	NL	NL
Blend of Proprietary Ingredients	<10	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).



MATERIAL SAFETY DATA SHEET

**SHEETROCK® Brand Lightweight All Purpose Joint Compound
Ready Mixed Plus 3 with Dust Control**

MSDS #61-362-001

Page 7 of 8

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Water	>35	Not Listed	Not Listed
Limestone	>35	Not Listed	D2A
Expanded Perlite	<15	Not Listed	D2A
Blend of Proprietary Ingredients	<10	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL - 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	1	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

MSDS # 61-362-001

SHEETROCK® Brand Lightweight All Purpose Joint Compound Ready Mixed Plus 3 with Dust Control

Page 8 of 8

Label Information

⚠ WARNING!

Dust generated from sanding product may cause irritation to eyes, skin, nose, throat and upper respiratory tract. Avoid irritation by reducing exposure to dust. Use in a well-ventilated area or provide sufficient local ventilation. If dusty, wear a NIOSH/MSHA-approved respirator. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX M



06106
Page 1/5

MATERIAL SAFETY DATA SHEET

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60606-4678

Date Issued: September 23, 1996
Product Safety: (800) 507-8899

SECTION I

**PRODUCT: SHEETROCK® Two-Purpose Joint Compound - TOTAL
Ready Mixed**

CHEMICAL FAMILY: Aqueous mixture of limestone and vinyl acetate polymer

SECTION II INGREDIENTS

MATERIAL	Wt%	TLV mg/m ³	PEL mg/m ³	CAS NUMBER
limestone	>50	10	15(T)/5(R)	1317-65-3
water	<40	(NE)	(NE)	7732-18-5
mica	<5	3(R)	3(R)	12001-28-2
expanded perlite	<5	10	15(T)/5(R)	93763-70-3
attapulgit	<5	(NE)	(NE)	12174-11-7
vinyl acetate polymer	<5	(NE)	(NE)	9003-20-7
vinyl acetate monomer	trace	10ppm	10ppm	108-05-4
acetaldehyde	trace	100ppm	100ppm	75-07-0
silica-crystalline, respirable	trace	0.1(R)	0.1(R)	14808-60-7

(T) - Total (R) - Respirable (NE) - Not Established

All components are included on the TSCA inventory.

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR: Off white paste; low odor.
BOILING POINT: 212°F
MELTING/FREEZING POINT: 32°F
SPECIFIC GRAVITY (H₂O = 1): 1.6
HARDENING TIME: Varies. Check usage and/or product specification data for product.
pH range: 7-8.5
VAPOR PRESSURE: 17 @ 20°C
Volatile Organic Compounds: <5 g/L



SHEETROCK® Two-Purpose Joint Compound - TOTAL

Page 2/5

**SECTION IV
FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): Noncombustible
SPECIAL FIRE FIGHTING PROCEDURES: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT: None
EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

**SECTION V
HEALTH HAZARD DATA**

Dust generated from this product would be considered a nuisance dust. This product can release nuisance dust if sanding. Eye, skin, nose, throat, and upper respiratory irritation may occur with prolonged dust exposure.

EFFECTS OF OVEREXPOSURE:

ACUTE:

EYES: Direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

SKIN: Direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, then wash skin thoroughly with mild soap and water. If irritation persists, consult physician. May dry skin.

INHALATION: Inhalation of dust from this product may irritate the nose, throat, lungs, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation from dust. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

INGESTION: No known effects.

CHRONIC:

EYES: None known.

SKIN: None known.

INHALATION: This product may contain small amounts of vinyl acetate monomer, vapors of which have been shown to cause tumors in the respiratory tract of laboratory animals. Chronic overexposure to vinyl acetate is not expected to occur during normal handling and use of this product. Vinyl acetate has been shown to cause irritation and cancer in inhalation studies with laboratory animals. Test levels of 600ppm over a lifetime caused an increase in tumors in the respiratory tract of the test animals. 200ppm caused irritation. No tumors were observed in the animals exposed at 50ppm or lower. There is no evidence of adverse effects to humans exposed to levels at or below the TLV.

Chronic overexposure to respirable crystalline silica may result in lung disease (i.e., silicosis) and/or lung cancer. Prolonged and repeated breathing of respirable mica may cause lung disease.

INGESTION: No known effects.



SECTION V
HEALTH HAZARD DATA
(Continued)

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush thoroughly with plenty of water for 15 minutes to remove particles. If irritation persists, consult physician.

SKIN: Rinse with water, then wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

INHALATION: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

INGESTION: No harmful effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, and respiratory system.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTE OF ENTRY: Inhalation; Eye and/or Skin contact.

CARCINOGENICITY OF INGREDIENTS:

MATERIAL	IARC	NTP
respirable crystalline silica	2A	Anticipated
acetaldehyde	2B	Anticipated
vinyl acetate monomer	2B	Not Listed

The quantity of respirable crystalline silica has not been determined in this product. Respirable crystalline silica is classified by IARC as a (2A) probable human carcinogen. Long-term breathing of large amounts of silica may cause lung disease (i.e., silicosis) and/or possibly lung cancer.

USG has measured exposure levels to respirable crystalline silica in actual joint compound product applications at job sites. Results of this industrial hygiene testing for USG joint compounds showed no detection of respirable crystalline silica following NIOSH Method 7500.

Vinyl acetate monomer and acetaldehyde, if present, are trace components of the vinyl acetate polymer. Quantities of monomer have not been measured but would be expected to be less than 0.1 Wt. %.



SHEETROCK® Two-Purpose Joint Compound - TOTAL

Page 4/5

**SECTION VI
REACTIVITY DATA**

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur.
INCOMPATIBILITY: None known.
HAZARDOUS DECOMPOSITION: CO₂ would be produced at high temperatures with the decomposition of limestone (~800°C). Stable under normal temperature and pressure. Product contains low level of organic volatiles which may be emitted or released in application processes involving the use of heat. Vent all ovens and process vessels to the outside atmosphere. Thermal decomposition will produce H₂O, CO₂, CO, and acetic acid. Could produce vinyl acetate monomers when temperature is above 175°C.

**SECTION VII
SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use normal clean up procedure. Spilled material can produce slippery conditions, be cautious to avoid falling. Wear appropriate protective equipment. Shovel material from spillage into a waste container for disposal.
WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations.

**SECTION VIII
SPECIAL PROTECTION INFORMATION**

No TLV assigned to this mixture, see Ingredients Section. Minimize dust exposures in accordance with good hygiene practice.

RESPIRATORY PROTECTION: Not typically necessary under normal conditions of use. Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients and to control dusting conditions. Wear a NIOSH/MSHA-approved respirator when dusty conditions exist, in poorly ventilated areas, and if TLV is exceeded.

VENTILATION: Ventilate to keep exposures below TLV. General ventilation is expected to be satisfactory. Use local exhaust ventilation if necessary to control dust.

PROTECTIVE EQUIPMENT: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye. Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. Wear adequate clothing to minimize chafing or drying of skin.



**SECTION IX
SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Normal precautions should be followed in handling, storage, and use. During handling and use wear the appropriate respiratory, eye and skin protection if warranted per environmental conditions.

Use wet sanding technique to reduce dust exposure when finishing joints. See "Finishing and Decorating Gypsum Panels - Wet Sanding, J-610/12-87".

Recommended Storage Methods: Keep from freezing. Store at temperatures less than 120°F. Monomer vapors can be evolved when material is heated.

OTHER PRECAUTIONS:

Δ WARNING

Dust generated from sanding product may cause eye, skin, nose, throat or respiratory irritation. Use wet-sanding to avoid creating dust. Avoid inhalation of dust and eye contact. If dusty, wear a NIOSH/MSHA-approved respirator. Prolonged and repeated exposure to respirable mica may cause lung disease. Wear eye protection. Provide good general ventilation and local exhaust ventilation to avoid excessive amounts of dust. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not ingest. If ingested, call physician. Product safety information: (800) 507-8899.
KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS:

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0 Other: N/A

HMIS Ratings: Health: 0 Fire: 0 Reactivity: 0

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

- 0 Minimal Hazard
- 1 Slight Hazard
- 2 Moderate Hazard
- 3 Serious Hazard
- 4 Severe Hazard

APPENDIX N

USG MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Page 1 of 8 Topping Lite Ready Mixed

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 4

CHEMICAL PRODUCT IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed
CHEMICAL FAMILY: An aqueous mixture of minerals and vinyl acetate polymer

COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	<50	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Water	>30	(NE)	(NE)	7732-18-5
Expanded Perlite	<10	10	15 (T) / 5 (R)	93763-70-3
Vinyl Acetate Polymer	<10	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Attapulgite	<5	(NE)	(NE)	12174-11-7
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



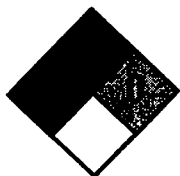
Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed

Page 2 of 8

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

General Fire Hazards: Not expected to burn.

Extinguishing Media: Water or use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures: Wear appropriate personal protective equipment (See section 8).

Unusual Fire & Explosion Hazards: None

Hazardous Combustion Products: Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.

Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability Classification:	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Rate of Burning:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable		

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).
Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed

Page 4 of 8

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed

Page 5 of 8

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound
Topping Lite Ready Mixed

Page 6 of 8

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	<50	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Water	>30	NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<10	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Page 7 of 8

Topping Lite Ready Mixed

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	<50	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Water	>30	Not Listed	Not Listed
Expanded Perlite	<10	Not Listed	D2A
Vinyl Acetate Polymer	<10	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Attapulgate	<5	Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

MSDS # 61-360-009

USG SHEETROCK® Brand Lightweight Topping Joint Compound Topping Lite Ready Mixed

Page 8 of 8

Label Information

⚠ WARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX O

USG MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 4

PRODUCT: USG SHEETROCK® Brand Taping Joint Compound

CHEMICAL FAMILY: A mixture of limestone, an emulsion polymer and other minerals

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>65	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Mica	<15	3 (R)	20 mppcf	12001-26-2
Attapulgate	<10	(NE)	(NE)	12174-11-7
Vinyl Alcohol Polymer	<5	(NE)	(NE)	9002-89-5
Hydroxypropyl Amylopectin Phosphate	<5	(NE)	(NE)	113894-92-1
Crystalline Silica	<5	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mppcf - million particles per cubic foot of air

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction.



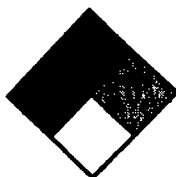
Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Dust exposures generated during the handling of the product may irritate eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. If dry, shovel or sweep up material from spillage and place collected material into a container for recovery or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposures. If washed down, may plug drains.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Keep containers closed when not in use

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

Appearance	White to off white	Viscosity	Not Applicable
Physical State	Solid (powder)	Solubility (H₂O)	~ 0.15 g/100 g solution
Odor	Low to no odor	Boiling Point	Not Available
pH @ 25 °C	~7.5-9	Melting Point	825-1339 °C
Particle Size	Varies	Softening Point	Not Available
Molecular Weight	Mixture	Freezing Point	Not Available
Bulk Density	~ 40-80 lb/ft ³	Vapor Density (Air = 1)	Not Applicable
Specific Gravity (H₂O = 1)	~ 2.3-2.6	Vapor Pressure (mm Hg)	Not Applicable
Percent Volatile	Zero	Evaporation Rate (BuAc = 1)	Not Applicable
VOC Content	Zero		

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003

Page 5 of 8

PHYSICAL AND CHEMICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

HAZARD IDENTIFICATION

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>65	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Mica	<15	NL	NL	NL	NL	NL	NL
Attapulgit	<10	NL	NL	NL	NL	NL	NL
Vinyl Alcohol Polymer	<5	NL	NL	NL	NL	NL	NL
Hydroxypropyl Amylopectin Phosphate	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>65	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Mica	<15	1088	Not Listed
Attapulgit	<10	Not Listed	Not Listed
Vinyl Alcohol Polymer	<5	Not Listed	Not Listed
Hydroxypropyl Amylopectin Phosphate	<5	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

- 1- Carcinogenic to humans
- 2A – Probably carcinogenic to humans
- 2B – Possibly carcinogenic to humans
- 3 - Not classifiable as a carcinogen
- 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

- 1- Known to be carcinogen
- 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

- A1 – Confirmed human carcinogen
- A2 – Suspected human carcinogen
- A3 – Animal carcinogen
- A4 - Not classifiable as a carcinogen
- A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"

Label Information

ΔWARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration

USG MATERIAL SAFETY DATA SHEET
USG SHEETROCK® Brand Taping Joint Compound

MSDS # 61-320-003
Page 8 of 8

ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:
Product Safety
USG Corporation
125 South Franklin St.
Chicago, Illinois 60606

END

APPENDIX P



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: October 8, 2003
Version: 5

PRODUCT: USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed
CHEMICAL FAMILY: An aqueous mixture of minerals and vinyl acetate polymer

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Limestone	>45	10	15 (T) / 5 (R)	1317-65-3
Or Dolomite		10	15 (T) / 5 (R)	16389-88-1
Water	<45	(NE)	(NE)	7732-18-5
Expanded Perlite	<5	10	15 (T) / 5 (R)	93763-70-3
Mica	<5	3 (R)	20 mppcf	12001-26-2
Attapulgite	<5	(NE)	(NE)	12174-11-7
Vinyl Acetate Polymer	<5	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mppcf - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator
Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis).

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 2 of 8

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 3 of 8

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire & Explosion Hazards:	None		
Hazardous Combustion Products:	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.		
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Classification:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable	Rate of Burning:	Not Applicable

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).

Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.

Protect from freezing, extreme heat, and exposure to direct sunlight.

Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Keep tightly sealed following use.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 4 of 8

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 5 of 8

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 6 of 8

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>45	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Water	<45	NL	NL	NL	NL	NL	NL
Expanded Perlite	<5	NL	NL	NL	NL	NL	NL
Mica	<5	NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<5	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 7 of 8

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Limestone	>45	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Water	<45	Not Listed	Not Listed
Expanded Perlite	<5	Not Listed	D2A
Mica	<5	1088	Not Listed
Attapulgit	<5	Not Listed	Not Listed
Vinyl Acetate Polymer	<5	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item #: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	2A	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

1- Carcinogenic to humans

2A – Probably carcinogenic to humans

2B – Possibly carcinogenic to humans

3 - Not classifiable as a carcinogen

4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

1- Known to be carcinogen

2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

A1 – Confirmed human carcinogen

A2 – Suspected human carcinogen

A3 – Animal carcinogen

A4 - Not classifiable as a carcinogen

A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 "Chemicals known to the State of California to Cause Cancer"



MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand All Purpose Joint Compound Mid-Weight™ Ready Mixed

MSDS # 61-360-002

Page 8 of 8

Label Information

ΔWARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX Q

USG MATERIAL SAFETY DATA SHEET

USG SHEETROCK® Brand Total Lite

MSDS # 61-360-022
Page 1 of 8

United States Gypsum Company
125 South Franklin Street
Chicago, Illinois 60680-4124
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: July 6, 2004
Version: 2

SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT: USG SHEETROCK® Brand Total Lite

CHEMICAL FAMILY: An aqueous mixture of minerals and vinyl acetate polymer

SECTION 2 COMPOSITION INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Water	>40	(NE)	(NE)	7732-18-5
Limestone	>35	10	15 (T) / 5 (R)	1317-65-3
Expanded Perlite	<10	10	15 (T) / 5 (R)	93763-70-3
Vinyl Acetate Polymer	<10	(NE)	(NE)	9003-20-7
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)	24937-78-8
Attapulgate	<5	(NE)	(NE)	12174-11-7
Crystalline Silica	<2	0.05 (R)	0.1 (R)	14808-60-7

(T) – Total (R) – Respirable (NE) – Not Established mmpfc - million particles per cubic foot of air
Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent for silica represents total quartz and not the respirable fraction. Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure.



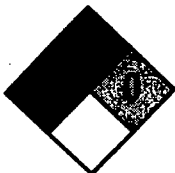
Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

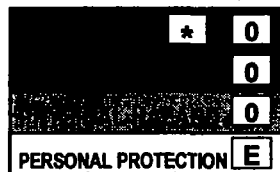
NFPA Ratings:

Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:

Health: *0
Fire: 0
Reactivity: 0



0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E- Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.

SECTION 3 HAZARD IDENTification

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Airborne dust during sanding or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: Direct, prolonged or repeated contact with the skin may cause irritation.

Inhalation: Inhalation of dust during sanding can irritate the nose, throat, and the upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

CHRONIC:

Eyes: None known.

Skin: None known.

Ingestion: No known effects.

Inhalation: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

FIRST AID PROCEDURES

Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

General Fire Hazards:		Not expected to burn.	
Extinguishing Media:		Water or use extinguishing media appropriate for surrounding fire.	
Special Fire Fighting Procedures:		Wear appropriate personal protective equipment (See section 8).	
Unusual Fire & Explosion Hazards:		None	
Hazardous Combustion Products:		Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Above 175° C – polyvinyl acetate may decompose to H ₂ O, CO ₂ , CO, and acetic acid, could produce vinyl acetate monomers.	
Flash Point:	None Known	Auto Ignition:	Not Applicable
Method Used:	Not Applicable	Flammability Classification:	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable	Rate of Burning:	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable		

CONTAINMENT:

No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:

Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. Floor may be slippery; use care to avoid falling. Shovel or scoop up material from spillage into a waste container for disposal.

DISPOSAL:

Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

HANDLING:

When sanding, minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).
Use good safety and industrial hygiene practices.

STORAGE:

Store at room temperature in a dry location.
Protect from freezing, extreme heat, and exposure to direct sunlight.
Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.
Keep tightly sealed following use.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray to off white	Odor	Low to no odor
Physical State	Paste	pH	~ 7-8.5
Vapor Pressure	17@20 °F	Vapor Density	Same as water
Boiling Point	212 °F	Freezing Point	32 °F
Melting Point	Not Applicable	Solubility (H2O)	Slight, unlimited dispersibility
Specific Gravity	1.5-1.7	Particle Size	Not Determined
Softening Point	Not Applicable	Evaporation Rate	Not Determined
Viscosity	Not Determined	Bulk Density	1.5-1.7 Kg/Litre
Percent Volatile	20-45	Molecular Weight	Mixture
VOC Content	<2 g/l		

SECTION 10: CHEMICAL REACTIVITY

STABILITY:

Stable.

CONDITIONS TO AVOID:

Contact with incompatibles.

INCOMPATIBILITY:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO₂). Above 175° C – polyvinyl acetate may decompose to H₂O, CO₂, CO, and acetic acid, could produce vinyl acetate monomers.

SECTION II
TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Direct contact may cause eye, skin and/or respiratory irritation.

LD₅₀: Not Available for product.

LC₅₀: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline silica: Industrial hygiene atmospheric respirable crystalline silica testing during the use and application of USG joint compounds did not detect any concentration of respirable crystalline silica exposure. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Vinyl acetate/acetaldehyde/formaldehyde: A component of this product is a common emulsion polymer most familiar as the component of ordinary white glue which exhibits the "sticky" characteristic. The emulsion polymer is not classified as a carcinogen by IARC, NTP or ACGIH. However, trace amounts of residual vinyl acetate monomers, acetaldehyde and formaldehyde may be associated with the production of the emulsion polymer.

Any exposure to vinyl acetate monomer, acetaldehyde, or formaldehyde is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

Industrial hygiene atmospheric formaldehyde testing during the use and application of USG joint compounds did not detect any concentration of formaldehyde exposure.

SECTION III
ECOTOXICITY INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

Ecotoxicity value: Not determined.

SECTION IV
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) Required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Water	>40	NL	NL	NL	NL	NL	NL
Limestone	>35	NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer	<10	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code



Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

SECTION 11 - REGULATORY INFORMATION

CANADIAN REGULATION (continued)

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Water	>40	Not Listed	Not Listed
Limestone	>35	Not Listed	D2A
Expanded Perlite	<10	Not Listed	D2A
Vinyl Acetate Polymer	<10	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
Attapulgite	<5	Not Listed	Not Listed
Crystalline Silica	<2	1406	D2A

IDL Item # : Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S)

All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	1	2	A2	Listed

IARC – International Agency for Research on Cancer (World Health Organization)

- 1- Carcinogenic to humans
- 2A – Probably carcinogenic to humans
- 2B – Possibly carcinogenic to humans
- 3 - Not classifiable as a carcinogen
- 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)

- 1- Known to be carcinogen
- 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists

- A1 – Confirmed human carcinogen
- A2 – Suspected human carcinogen
- A3 – Animal carcinogen
- A4 - Not classifiable as a carcinogen
- A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Label Information

ΔWARNING!

Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. When sanding, avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Close container and discard properly.

Product safety information: (800) 507-8899 or www.usg.com

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

Prepared by:

Product Safety

USG Corporation

125 South Franklin St.

Chicago, Illinois 60606

END

APPENDIX R

Part 48 Training Program Optional Training Plan Format

Metal/Nonmetal Surface Mines

General Information

1. Company and mine names

MSHA ID #:	42-00160
Company Name:	UNITED STATES GYPSUM CO
Address:	81 North State, SIGURD, UT 84567
Mine Name:	JUMBO-JENSEN MINE

2. Person responsible for health and safety training at the mine

Name:	Bruce H. Allen
Position/Title:	Plant Manager
Phone Number:	(435) 896-2401
E-Mail:	gmynar@usg.com

3. MSHA approved instructors and courses each is qualified to teach

Name(s)	SSN	Course Code(s)
George Mynar	0866	IS all

4. Location(s) where training will be given

New Miner:	minesite/offsite
Experienced Miner:	minesite/offsite
Task Training:	minesite/offsite

Annual Refresher Training: minesite/offsite
Hazard Training: minesite/offsite

5. Number of miners and trainees

Approximate number of miners employed:	11
Maximum number of trainees per training session:	11

TRAINING PROGRAM FOR NEW MINERS (SURFACE)

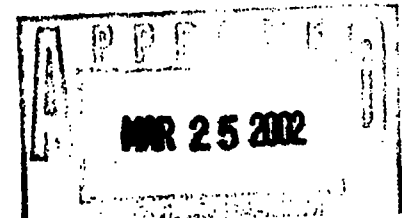
Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Instruction in statutory rights of miners and their representatives under the Act; authority and responsibility of supervisors.	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	Mine Safety and Health Act	Oral
Transportation controls and communications systems.	1 hour	Conference Room and Quarry	Approved Instructor	Demonstration Lecture Discussion	MSHA Standards, Company Policy	Oral
Introduction to the work environment.	2 hour	Plant and Quarry	Approved Instructor	Walk Around Lecture Discussion	Quarry and Plant	Oral
Escape and emergency evacuation plans; fire warning and fire fighting.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, Company Policy	Oral
Ground control and working around highwalls; water hazards; night work.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, MSHA Guides	Oral

MAR 25 2002

TRAINING PROGRAM FOR NEW MINERS (SURFACE)

Self Rescue and respiratory devices.	1 hour	Conference Room	Approved Instructor	Lecture Discussion	Respirator	Oral
Health	1 hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, MSHA Guides	Oral
Hazard Recognition	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Electrical Hazards	1 hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
First-Aid	8 hour	Conference Room	Approved Instructor	Lecture Discussion	Red Cross	Oral
Explosives	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Blaster, Company Policy	Oral
Health and Safety aspects of the task to which the new miner will be assigned.	5 hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral

24 Hours
Total



TRAINING PROGRAM FOR NEWLY HIRED EXPERIENCED MINERS (SURFACE)

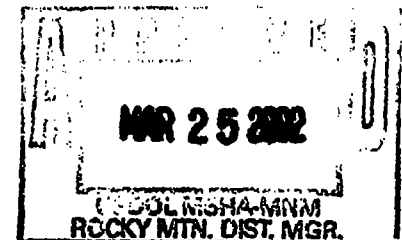
Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Introduction to the work environment.	1 hour	Plant and Quarry	Approved Instructor	Walk Around Lecture Discussion	Quarry and Plant	Oral
Instruction in statutory rights of miners and their representatives under the Act; authority and responsibility of supervisors.	1/2 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	Mine Safety and Health Act	Oral
Transportation controls and communications systems.	1/2 hour	Conference Room and Quarry	Approved Instructor	Demonstration Lecture Discussion	MSHA Standards, Company Policy	Oral
Escape and emergency evacuation plans; fire warning and fire fighting.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, Company Policy	Oral
Ground control and working around highwalls; water hazards; night work.	1 hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, MSHA Guides	Oral

MAR 25 2002

TRAINING PROGRAM FOR NEWLY HIRED EXPERIENCED MINERS (SURFACE)

Hazard Recognition	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Mandatory Health and safety standards.	1 hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards	Oral
Prevention of Accidents	1 hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Emergency Medical Procedures	1 hour	Conference Room	Approved Instructor	Lecture Discussion	Red Cross	Oral
Health	1 hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, MSHA Guides	Oral
Health and Safety aspects of the task to which the new miner will be assigned.	1 hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral

10 hours total



TRAINING PROGRAM - EXPERIENCED MINER NEW TASK TRAINING (SURFACE)

WORK ASSIGNMENT	TOTAL HOURS	LOCATION	CONDUCTED BY <i>EXPERIENCED PERSON IN THE ASSIGNED TASK.</i>	TRAINING PROCEDURES	EQUIPMENT/MATERIALS	EVALUATION
<u>CRUSHER OPERATOR</u> 1. Loader Operator a) Safety Check b) Operation 2. Rock Breaker 3. General Crusher Operations. 4. House Keeping in and around Crusher System.	20-30 hours	Plant (Crusher)	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Front End Loader, Rock Breaker	Questions, Demonstration, Observations
<u>HAUL TRUCK OPERATOR</u> 1. Equipment Inspection 2. Operations 3. Pit Loading Procedures 4. Road Traffic 5. Communications	2-6 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Haul Truck	Questions, Demonstration, Observations
<u>DOZER OPERATOR</u> 1. Equipment Inspection 2. Operations 3. Techniques for stripping, ripping, road building, and reclamation. 4. Minor Repairs	20-30 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Dozer	Questions, Demonstration, Observations

* As per phone call Bruce Cassin and Steve Miller
2-15-2002

MAR 25 2002

TRAINING PROGRAM - EXPERIENCED MINER NEW TASK TRAINING (SURFACE)

<u>DRILL OPERATOR</u> 1. Equipment Inspection 2. Operation 3. Layout of drill pattern 4. Minor repairs to drill	30-40 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Drill	Questions, Demonstration, Observations
<u>GRADER OPERATOR</u> 1. Equipment Inspection 2. Operation 3. Techniques of contouring and road blading. 4. Road Traffic	10-20 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Grader	Questions, Demonstration, Observations
<u>BLASTER</u> 1. Explosives Safety 2. Pattern layout 3. Inspection of blast site 4. Record keeping 5. Handling and Transportation	30-40 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards	Questions, Demonstration, Observations
<u>BACKHOE/ ROCK BREAKER OPERATOR</u> 1. Equipment Inspection 2. Operation 3. Minor Repairs 4. Road Traffic 5. Communications	2-6 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Backhoe/Rock Breaker	Questions, Demonstration, Observations

A P P R O V E D
MAR 25 2002

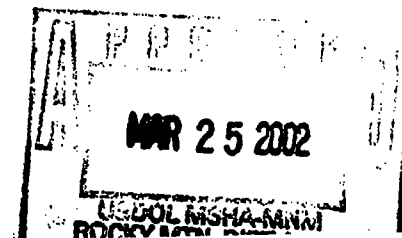
TRAINING PROGRAM - EXPERIENCED MINER NEW TASK TRAINING (SURFACE)

WATER TRUCK						
1. Equipment Inspection 2. Operation 3. Loading Procedures 4. Road Traffic 5. Communications	6-10 hours	Plant and Quarry	Experienced Person	Lecture, Discussion, Demonstration	MSHA Standards, MFG. Handbook, Company Policy, Water Truck	Questions, Demonstration, Observations

* Health and safety aspects of the operating procedures for water trucks, equipment and/or machinery. Supervised practice during non-production. Supervised operation during production. Safe operating procedures for new and modified machines and equipment.

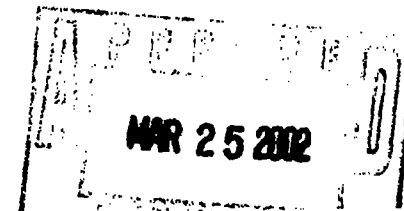
* As per phone call Bruce Canon - Stone Valley.

2-15-2002.



TRAINING PROGRAM - HAZARD TRAINING (SURFACE)

Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Hazard recognition and avoidance.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral
Emergency and evacuation procedures.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral
Health and safety standards; safety rules and safe working procedures.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral
Self-rescue and respiratory devices.	1/2 - 1 hour	Conference Room	Approved Instructor	Lecture, Discussion	MSHA Standard, Company Policy	Oral



 MAR 25 2002

ANNUAL REFRESHER TRAINING (SURFACE)

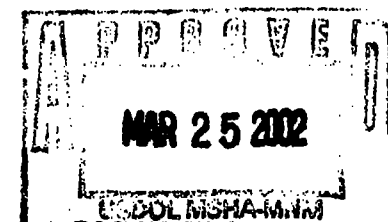
Course	Estimated Time	Location	Conducted By	Teaching Methods	Course Material	Evaluation
Mandatory Health and safety standards.	1/2 Hour	Quarry and Plant	Approved Instructor	Lecture Discussion	MSHA Standards	Oral
Transportation/Ground controls and communications systems.	1 Hour	Conference Room and Quarry	Approved Instructor	Demonstration Lecture Discussion	MSHA Standards, Company Policy	Oral
Escape and emergency evacuation plans; fire warning and fire fighting.	1/2 Hour	Conference Room and Quarry	Approved Instructor	Walk Around Lecture Discussion	MSHA Standards, Company Policy	Oral
First-Aid	3 1/2 hours	Conference Room	Approved Instructor	Lecture Discussion	Red Cross	Oral
Electrical Hazards	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, Company Policy	Oral
Health	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	MSHA Standards, MSHA Guides	Oral
Explosives	1/2 Hour	Conference Room and Quarry	Approved Instructor	Lecture Discussion	MSHA Blaster, Company Policy	Oral

MAR 25 2002

ANNUAL REFRESHER TRAINING (SURFACE)

Self Rescue and respiratory devices.	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	Respirator	Oral
Prevention of Accidents	1/2 Hour	Conference Room	Approved Instructor	Lecture Discussion	Respirator	Oral

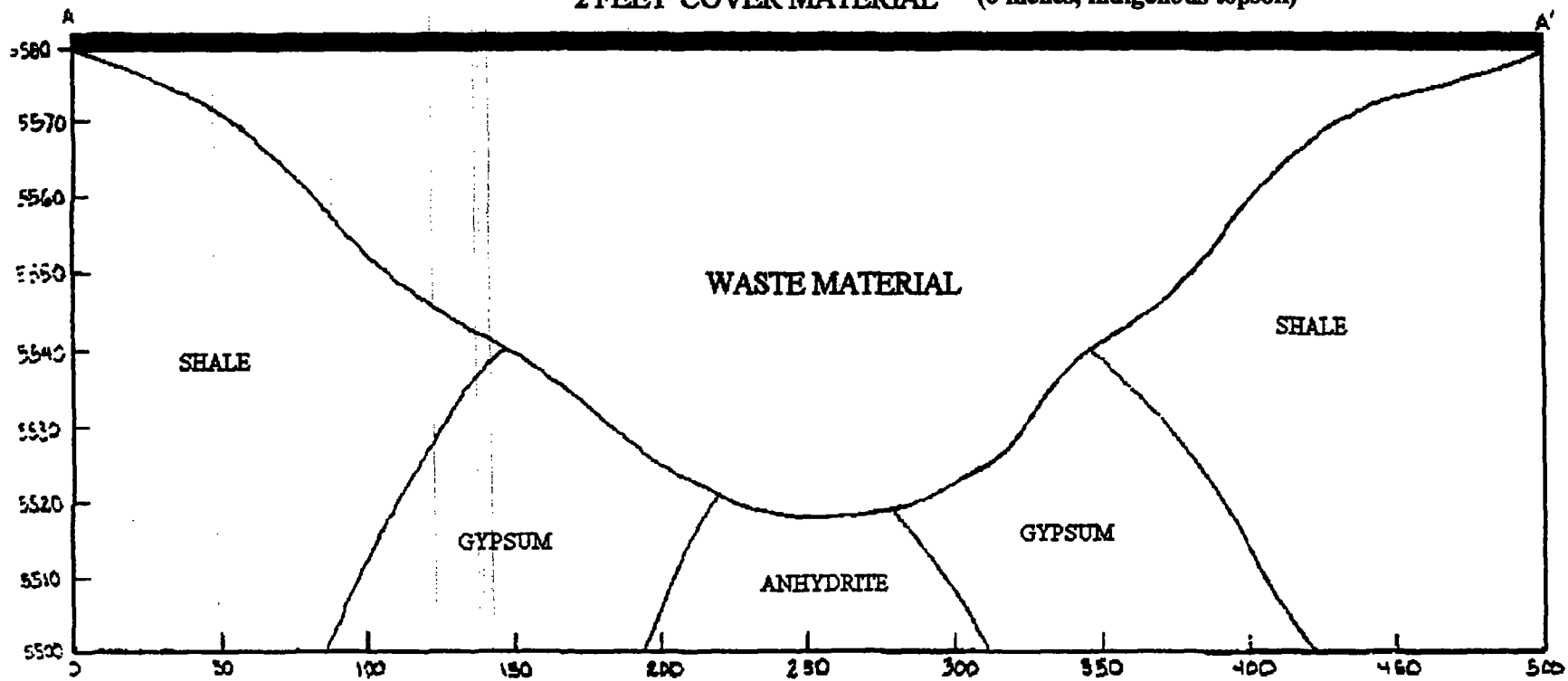
8 Hours Total



APPENDIX S

FINAL COVER

2 FEET COVER MATERIAL (6 inches, indigenous topsoil)



APPENDIX T

Estimated Closure Cost of Sigurd Phase 1 Landfill

We are required to have 1.5' of cap over the Landfill at closure.
The top 6" should be top soil, which is comparative to the surrounding top soil.

Rule Location	
R315-309-2(2)	Financial Assurance to updated every 5 years
R315-309-2(3)(a)(i)&(ii)	Type of Cap
	# of Acre's in Landfill
	depth of cap (ft.)
	cubic ft. in cap
	lbs./cuft
	# of tons in cap
	Price \$/ton
	Total Material Cost
	# of operators
	# of Labor hours
	\$ per hour
	Total Labor Cost
	(i)The cost of obtaining, moving, and placing the cover material.
	(ii)The cost of final grading of the cover material.
	\$157,458
R315-309-2(3)(a)(iii)&(iv)	Type of Cap
	# of Acre's in Landfill
	depth of cap (ft.)
	cubic ft. in cap
	lbs./cuft
	# of tons in cap
	Price \$/ton
	Total Material Cost
	# of operators
	# of Labor hours
	\$ per hour
	Total Labor Cost
	Cost of Seed \$/lb
	lbs./acre
	Total seed cost
	(iii)The cost of moving, and placing topsoil on the final cover and
	(iv)The cost of fertilizing, seeding, and mulching or other approved method.
	\$117,713
R315-309-2(3)(b)	The post closure care cost estimate.

Using scenario of plant being shut down:

Annual inspections - including travel, hotel, wages	\$1,500
(1) 30 years of inspections (\$1500 x 30) =	\$45,000
\$300/hr equipment & labor (5 days @ 10 hrs)	\$15,000
Cost of replacement of Topsoil and berms	\$10,000
Total cost for repair work	\$25,000
Contract work to repair cap and berms: once/q0 yr.	3
(2) Total repair costs =	\$75,000
Total post closure care cost estimate (1)+(2).	\$120,000
(i)ground water monitoring. R315-304-5(4)(c) A Class IIIb landfill is exempt from ground water monitoring requirements of rule R315-308	
(ii)leachate monitoring and (iii)gas monitoring and control are not required	
(iv)cover stabilization	
Total Closure Cost	\$395,171